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COMMUNITY ORIENTED PRIMARARY CARE IN ACTION

A Practice Manual
for Primary Care Settings

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Health Resources and Services Administration

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Health Resources and Services Administration
Bureau of Health Care Delivery Assistance

COMMUNITY ORIENTED PRIMARY CARE IN ACTION:

A PRACTICE MANUAL FOR PRIMARY CARE SETTINGS

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PREFACE

In 1984, the University of California at Berkeley, School of Public Health was awarded a contract by the Bureau of Health Care Delivery and Assistance (BHCDA) to "advance the concept and practice of community oriented primary care (COPC)." The contract required the School to work with health centers funded by BCHDA to:

(1) determine what elements of COPC are possible to implement in various primary health care delivery sites;

(2) determine what impact specific COPC efforts have on the community and the health practice;

(3) determine what would be required to incorporate COPC into ongoing delivery sites; and

(4) develop curricula and training modules for educational programs designed to prepare multidisciplinary health care teams to incorporate COPC into health care delivery.

To carry out the requirements of the contract, the School of Public Health developed a seminar and field work projects based on the Institute of Medicine's (IOM) model of COPC. Over the past four years the faculty and students of the School and staff of community health centers in the Bay Area worked together to increase our understanding of the opportunities for, and obstacles to, the implementation of COPC in community health centers. Feedback from health center staff and students doing field work projects enabled the faculty to improve the formal coursework and relevant training materials.

Based on these efforts, a training manual to aid community health centers interested in implementing COPC was developed. The initial version was field-tested at several health centers during the summer and fall of 1987 and has subsequently been revised. Thus, the manual presented here represents the results of these efforts to further understanding of the applicability of COPC concepts in primary care practice.

The manual is designed to enable individuals who hold leadership positions in health agencies to initiate and carry out the changes necessary to implement COPC. The organizational format generally follows the IOM model, addressing each of the four components of COPC, i.e., defining the community, identifying health problems, modifying the health delivery program, and monitoring program effectiveness. The manual also is designed to give practical information to enable key center staff to apply COPC principles to their setting. Examples are used throughout to illustrate the application of the different steps of the COPC model in real-life situations. The reader will note two additions to the model of COPC presented in the IOM's report, namely, a discussion of both strategic planning and community involvement. COPC is, after all, a planning process applied to the organization and delivery of primary care which requires community involvement for its successful implementation. In addition, the bibliography, primary readings, and additional resource materials at the end of the manual provide further information to enhance the ability of the reader to apply the techniques discussed in this manual.

It is my hope that this manual will, indeed, provide health centers with the impetus and knowledge to enhance and/or implement COPC in their centers.

I am grateful to the faculty, students, clinic preceptors and staff, all of whom contributed their experience and knowledge to our addressing the practical problems faced by health centers today. The course lectures and initial drafts written by the contributing authors formed the basis for much of the text. In addition, the insight into the concepts of COPC provided by Alberta Parker, MD, and Joseph Abramson, MD, are greatly appreciated. Paul Mico should also receive acknowledgement for his invaluable assistance in the evaluation and subsequent revision of this manual. Finally, credit for designing and editing the entire manual goes to Nedra Overall and Julie Williamson, whose tireless efforts assured the completion of this work.

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CHAPTER 1

THE DEVELOPMENT OF PRIMARY CARE AND COPC

Community oriented primary care (COPC) combines the traditional principles of primary care and public health in the planning and delivery of health care services. The basic concepts of primary care and COPC are presented. The evolution of community health centers since their inception under the Office of Economic Opportunity (OEO) is traced, and the applicability of the Institute of Medicine's (IOM) model of COPC is discussed. Upon completing this chapter, the reader should have an understanding of each of the components of the operational model of COPC; who is involved in making COPC work; and what the benefits and barriers are to adopting this model in the current social and economic climate.

INTRODUCTION

In the past two decades there has been increasing emphasis worldwide on the development of primary health care programs that take into consideration all the basic health care needs of a population. This emphasis is exemplified by the World Health Organization's push in the developing world for primary care services that are directed to the community's most important health needs and developed with the close cooperation and involvement of that community (World Health Organization, 1978).

In contrast, primary care in the United States has focused on the provision of medical care services to individuals rather than meeting the more broadly determined health needs of populations. These services have remained largely medical in nature even though the determinants of health are known to involve many factors which cannot be addressed through medical care services. This focus also fails to consider knowledge about population groups and relevant risk factors. The areas of health promotion and risk reduction are frequently not addressed.

The health center movement of the late sixties and seventies was developed to bring appropriate and comprehensive services to specific underserved populations. This movement represented a departure from the historical mode of primary care delivery focused on individual patients. Departments of public health have traditionally focused on addressing community-based health problems. However, these efforts have often been separate, divergent and even competitive with, primary care delivery. Currently, prepaid group practices are attempting, with varying success, to consider the comprehensive primary care needs of their patient populations. The development of community oriented primary care in the United States is an attempt to integrate both public health and primary care approaches to provide a more unified, comprehensive health program for the community.

THE DEVELOPMENT OF COMMUNITY ORIENTED PRIMARY CARE

The term "community oriented primary care" was first used by Sidney Kark and was based on his experiences as a primary care physician in South Africa in the 1950s. His assignment in Africa was to set up a clinic in a rural area which previously had no health care facilities. He decided that his first task would be to map out the area to find out where his "community" lived. This effort was the beginning of defining the community, the first step of COPC as it is known today. The next step was to identify community health problems. He did not want to build a clinic to take care of emergency surgery and trauma if the main health problems in the area were infant diarrhea or malnutrition. The third step Dr. Kark outlined was to involve the community in setting priorities for health needs so that he could enlist their support in designing specific health programs. The last step, evaluation of the programs, provided a feedback loop to the community and the health providers so that programs could be modified according to the outcomes. The system was planned to be dynamic through constant monitoring for effectiveness and appropriateness of the services. In essence, what Dr. Kark proposed was the addition of a community approach to the standard practice of primary care. Together these concepts became known as "COPC."

DEFINITION OF PRIMARY CARE IN THE UNITED STATES

In the United States good primary care has been described as medical care that is provided in an office or clinic setting by a provider (either doctor, nurse or other health care professional) who takes responsibility for the patient's health. The Institute of Medicine, in a report on primary care, describes this care as having five components: accessibility, comprehensiveness, coordination, continuity and accountability (National Academy of Sciences, 1978).

First, primary care should be <u>accessible</u>. The patient should be able to initiate contact with the health care system, and the services provided should be acceptable to that patient. This means that the care provided should not only be available 24 hours a day, seven days a week, but should also be physically accessible and affordable to individuals in need of care. In addition, this care should also be culturally, psychologically and socially acceptable to the patients being served.

Second, primary care must be <u>comprehensive</u> to the degree that it includes 90 percent of all personal health care not managed in the home or by the patient or his or her family. This would include prevention and health education as well as diagnosis and treatment of disease.

Third, primary care should be <u>coordinated</u> with other services so that all of the patient's health-related needs are cared for. This includes assisting the individual in obtaining social support services, financial assistance, or home care, depending on his or her individual needs. Primary care providers must coordinate the patient's care with other services, such as those of medical specialists or social workers, when referral becomes necessary.

Fourth, primary care must be continuous. The primary care provider takes responsibility for coordinating services as well as following up on these services and on the patient's well-being. The relationship of a primary care provider and a patient is unique in this sense. Whether the patient is ill or well, under the care of specialists or other health care providers, the primary care provider retains responsibility for the patient's health.

Finally, the fifth component of primary care is that it is accountable to the patient, the community and other health care providers. This aspect broadens the usual scope of primary care to include quality assurance and measurement of health care outcomes.

Primary care is delivered from a variety of settings, including hospital outpatient clinics, private providers, group practices, health maintenance organizations, and community health centers. The community health centers, in their early stages of development, perhaps came the closest to reflecting the COPC model of health care delivery. To better understand the potential for furthering the concepts and practice of COPC, it is important to understand the distinctions between COPC and primary care as well as the forces which have shaped the development of community health centers over the past twenty years.

DISTINCTIONS BETWEEN COPC AND PRIMARY CARE

There are several distinctions between COPC and good primary care that should be noted. The IOM's operational model of COPC distinguishes between a COPC practice and a good primary care practice by how the community is defined. In a non-COPC primary care practice the community is generally defined as patients who are currently treated on an individual basis, the active user population. In a COPC practice the defined community includes both active users and non-users of the clinic. Primary care practices use a case-oriented approach to assess health needs. A COPC practice combines this approach with epidemiologic methods to determine the needs of the broader community. As a result, COPC programs include intervention strategies that address both individual cases and the population. Further discussion on defining a community for COPC is presented in Chapter 3.

Community involvement in clinic planning and implementation is also an essential ingredient of a COPC practice. Both the clinic and community can benefit when they are involved in each other's activities. Equally important, yet less well discussed, is the need for clinic staff to be involved in their community by becoming familiar with community elements such as political structures, neighborhood issues, local organizations, the school and transportation systems, etc. This type of involvement can not only make the clinic more visible to the community, but it can also help to identify potential community resources for future planning and program development activity.

A final distinction of COPC practices are the evaluation measures used. In a COPC practice, evaluation measures are outcome based and reflect changes in community health status, or in the specific community health problem being addressed. Although there is little precedent for conducting this type of population-based evaluation, it is important for clinics to begin development

of indicators that offer some evidence of how their programs affect the population as a whole.

In summary, COPC incorporates the elements of good primary care delivery and adds to this a population-based approach to identifying and addressing community health problems. Figure 1.1 illustrates how traditional primary care, when combined with a community approach, becomes community oriented primary care.

Clinic Function:	Primary Care	+	Community Approach	= COPC
View of Patient Population	Patients seen as individuals	+	Population based	
Method of Needs Assessment	Case-oriented	+	Epidemiologic tools	
Planning	Primarily concerned with utilization	+	Health needs of the population served	= COPC
Use of Work Force	Professional specialties	+	Multiple roles; ability to adjust skill level	
Environmental Change	Individualized patient education	+	Community involvement	

FIGURE 1.1: PRIMARY CARE AND COPC

THE DEVELOPMENT OF PRIMARY CARE AND COPC IN THE UNITED STATES

Organized primary care services are a relatively recent development in the United States, the result of a federal response to the need for comprehensive health services in medically underserved areas. In the late 1960s, President Johnson declared his "War on Poverty." At this time the Office of Economic Opportunity was set up to combat joblessness, lack of adequate housing and limited educational opportunities in poor communities. Under this program, several innovative proposals were developed to provide health care. One of these proposals was the establishment of neighborhood health centers which, incidentally, reflected the COPC model of health care delivery. These centers/clinics were to be community based, serving the population of poor and minorities who had become eligible for health insurance under Medicaid legislation passed in 1965. The earliest of these health centers, Mound Bayou in Mississippi and Columbia Point in Boston, were to be administered by the Medical School at Tufts University, but run by the local community. Local control of the centers was implemented by electing community boards and training and hiring community members. The health centers were to be more than places to obtain primary health care: they were to be significant social and economic institutions in the community.

This model of neighborhood health centers is easier to imagine in the late sixties than now. At that time, federal funds were allocated for comprehensive services, job training and new program development. The community was activated by its new powers, and opportunities seemed endless. It was also expected that the clinics would become self sufficient through Medicaid and Medicare. Hospital and primary care costs were covered by these new forms of government insurance, and almost all clients of the health centers were eligible. Expenses not covered by government insurance were paid for by other sources of federal funding and categorical grants. Community outreach workers were hired and trained; transportation services were developed; and social workers, nutritionists and family planning counselors were all considered part of the health care team. This new kind of primary care clinic was not run solely by a doctor-nurse pair; rather, it involved people in a variety of roles with varying skills.

This was an auspicious beginning for organized primary care delivery. It was comprehensive, continuous, accessible, and it was coordinated with other services. The clinics were required to be accountable in that they had community boards to tell them whether they were providing appropriate services. In addition they had to prepare need/demand assessments for their annual grant renewals.

There were several aspects of these new reforms in health care delivery which prevented a true COPC model from being developed. One of them was the method used by the health centers in defining the community for which they were providing services. At first, the community was defined by a geographic area in which there was a high concentration of low-income and medically-underserved persons. Since almost everyone who lived within the specified geographic region surrounding the clinic was eligible for services, the communities were relatively easy to define.

However, as other providers began to set up practices in these same underserved areas, taking advantage of Medicaid reimbursements, the population served by the clinic became less clear. This led to problems in identifying the health needs of the community and in determining the effectiveness of programs. The clinics did not use broad social and geographic factors to define their community. Instead, they relied on their registered patient population. In addition, there were few attempts to utilize measures of health, disease, and mortality in determining the community's health status. The clinics relied on a generally accepted principal: they were providing an essential service and only needed to show how those services were being delivered. Outcomes were generally measured only in the clinic's registered patients and not for the community as a whole. Without these two components, community definition and community-specific outcome measures, true COPC was not being practiced.

The Transformation of Primary Care

The federal government began a reorganization following the change of administration in 1968 which was called the "New Federalism." There were three principal elements of this new organizational structure. The first was more reliance on state and local governments in the operation and administration of

federal grant programs. Categorical grants were to be replaced by "block" grants which would hand over a lump sum of funds to the states, to be used as they wished. A second element was the decentralization of federal programs to facilitate administration on the local level. The third element was the restructuring of federal departments to allow this "revenue sharing" to occur. In 1970, the neighborhood health centers were transferred from the Office of Economic Opportunity to the Community Health Center Program in the Public Health Service under Section 314E of the Public Health Service Act and were subsequently called community health centers (CHCs). In 1973, section 330 of the Public Health Service Act gave specific authority for administering the community health centers to the Public Health Service.

As government agencies were restructured, new financial priorities were established. Health care costs had become the largest single component of the federal budget, second only to defense. Congress passed the National Health Planning and Resources Development Act (PL93-641) in 1974. One of the main provisions of this act was to control escalating health care costs by regulating capital purchases. Attempts to control increasing costs have become the driving force behind much health legislation since this time. The prevailing influences on federally-funded health programs during the late 1970s and early 1980s have been those of resource limitation, restriction of growth and cost control. The health centers, which numbered over 560 in 1975, were expected to become more self-sufficient and survive on less federal money by attracting patients with private insurance; obtaining payment for all Medicaid and Medicare eligible patients; developing sliding fee scales; and cutting back in nonreimbursable services such as transportation, health workers, or job training.

In the new financial environment of the eighties, extensive cutbacks in federal funding were inevitable. Some of these cutbacks sought to reduce overlap in categorical programs and the resultant waste in services. Specific programs were dropped by the states, and eligibility requirements were tightened. The initiative for CHCs to become financially self-sufficient proved to be a critical factor influencing the role of health centers in their community. Cutbacks for health centers generally meant cutbacks in the education and welfare components of their programs. No longer were outreach workers seen as vital to the provision of primary care. Even preventive services, in some cases, were drastically reduced over the last ten years. Thus, the health centers were crippled in providing COPC. Today, with limited resources, they provide care which in many situations is often episodic or "band-aid," rather than the comprehensive, continuous care described earlier.

COMMUNITY ORIENTED PRIMARY CARE IN PRACTICE

COPC has emerged in the United States as a method for developing comprehensive health care services on the community level. In 1982, the Institute of Medicine of the National Academy of Sciences held a conference to review achievements in the delivery of primary care by private practitioners, community health centers, and the variety of pre-paid group practices to specific populations. These conference participants recognized the need for closer affiliation between academic centers and community-based organizations (CBOs)

and promotion of collaborative efforts between these organizations. The need to train practitioners to apply COPC and to understand the applicability of COPC concepts to a wide variety of health care delivery settings was recognized by all participants as critical to the advancement of the model. During this conference COPC was defined in its most general form as "the provision of primary care services to a defined community, coupled with systematic efforts to identify and address the major health problems of that community through effective modifications both of the primary care services and other appropriate community health programs" (National Academy of Sciences, 1984).

In 1983, the IOM undertook a detailed study on the applicability of COPC to the current health care system (National Academy of Sciences, 1984). This study reviewed efforts in primary care that were directed to specific communities or populations. An important accomplishment of this research was the development of a well-defined model of COPC that could be used to compare different clinics to each other, as well as to measure a clinic's level of COPC accomplishment.

The operational model of COPC developed by the IOM contains four elements:

1) definition and characterization of the community;
2) identification of the community's health problems;
3) modification of the health care program in response to the community health needs identified; and
4) monitoring the impact of program modifications.

Criteria were developed for each of these elements, called stages, to enable a medical practice to measure the degree to which it had already achieved the COPC model. This progress was measured against five stages, with Stage 0 representing no COPC activity, and Stage IV the most advanced level of COPC operations. Tables 1.1 - 1.4 summarize the specific definitions for each stage and element of the COPC model. (Further discussion of these stages may be found in Community Oriented Primary Care: A Practical Assessment, Vol. 1 (report of a study, National Academy of Sciences, 1984.)

USES OF THE COPC MODEL AND THE STAGING CRITERIA

The value of the stages of the COPC model are twofold. First, the stages represent a progression of achievement in the model. A primary care clinic can be engaged in COPC practice without achieving Stage IV in every element of the model. Thus, developing COPC in an existing practice can be a gradual and incremental process, with the stages representing "landmarks" of successful implementation. Second, the stages provide guidelines for planning and can be used to establish operational goals for the health care clinic.

In practice, the staging criteria have proven to be valuable tools for assisting health center staff in setting goals to better address the needs of their community. It is important that flexibility is allowed in the interpretation of these stages. In many health centers, resource limitations often prevent

TABLE 1.1: Staging Criteria for COPC Functions -- Defining and Characterizing the Community

STAGE 0:	No effort has been made to define or characterize a community beyond the active users of the practice.
STAGE I:	There is no enumeration of the individuals who constitute the community. The community is characterized by extrapolation from large area census data.
STAGE II:	There is no enumeration of the community, but it is characterized through the use of secondary data that correspond closely to the community for which the practice has accepted responsibility.
STAGE III:	The community can be enumerated and is actively characterized through the use of a database that includes all members of the community and that contains information to describe its demography and socioeconomic status. (Often such a data system is constructed over time from the active users of services, but approximates the community closely, e.g., at or above 90 percent coverage of the community.)
STAGE IV:	Systematic efforts assure a current and complete enumeration of all individuals in the community, including pertinent demographic and socioeconomic data. For each individual, information exists that facilitates targeted outreach, e.g., address, telephone number, etc.

TABLE 1.2: Staging Criteria for COPC Functions -- Identifying Community Health Problems

STAGE 0:	No systematic efforts have been made to understand the health status or health needs of the community. Alternatively, the results from studies of the patient population are assumed to reflect the health problems in the community as a whole.
STAGE I:	Community health problems are identified through general consensus of the providers and/or community groups.
STAGE II:	Community health problems are identified by extrapolation from systematic review of secondary data, such as vital statistics, census data, large area epidemiologic data, etc.
STAGE III:	Community health problems are examined through the use of data sets that are specific to the community but tend to focus on single health problems or health care issues.
STAGE IV:	Formal mechanisms (usually but not always epidemiologic techniques) are used to identify and set priorities among a broad range of potential health problems in the community, identify their correlates and determinants, and characterize the existing patterns of health care related to the problem.

TABLE 1.3:	Staging Criteria for COPC Functions -- Modifying the Health Care Program
STAGE 0:	No modifications are made in the primary care program in specific response to health needs of the larger community.
STAGE I:	Modifications address health problems believed to exist in the community, but are made more in response to a national or organization-wide initiative than in response to a particular problem specifically identified in the community.
STAGE II:	Modifications address important community health problems, but are chosen largely because of the availability of special resources to address that particular problem and closely follow guidelines that may not be tailored to the community's needs.
STAGE III:	Modifications in the health care program are tailored to the unique needs of the community and involve (where appropriate) both the primary care and the community/public health components of the program.
STAGE IV:	Modifications in the program involve both primary care and community/public health components and are targeted to specific high risk or priority groups, with active efforts (e.g., outreach) made to reach specific high-risk or priority groups within the community.

TABLE 1.4:	Staging Criteria for COPC Functions -- Monitoring the Effectiveness of Program Modifications
STAGE 0:	Examination of program effectiveness is limited to the impact on the active users of health services.
STAGE I:	Program effectiveness is viewed in terms of impact on the community as a whole, but is based on subjective impressions of the practitioners and/or community groups.
STAGE II:	Program effectiveness is estimated by extrapolation from large area data or vital statistics.
STAGE III:	Program effectiveness is determined by systematic examination of a data set that is specific to the community.
STAGE IV:	Program effectiveness is determined by techniques which are specific to the program objectives, account for differential impact among risk groups, and provide information on the positive and negative impacts of the program.

the achievement of Stage IV, or even Stage III, in every element of the model as they are described by the IOM. However, these advanced criteria can be used to help primary care center staff establish COPC goals, taking into consideration their own unique circumstances.

Regardless of how a clinic defines its "ideal" level of achievement, it is essential that it establish goals in each of the elements of the COPC model. The four elements of the model parallel the basic steps of a traditional planning process. They offer a simple, step by step method for identifying and addressing community health needs. If the clinic neglects to carry out one or more of these steps, it will have considerable difficulty determining whether or not it is actually meeting the needs of the community it was established to serve.

PRINCIPLES OF COPC PRACTICE

The actual benefits of COPC to community health lie in the interpretation and application of the model. The greatest value can be realized if certain principles are used to guide its implementation. The following list summarizes some of these principles.

1. Collaboration and involvement -- Both the community and health agency work cooperatively to plan and implement the community health objectives.

2. Prevention and treatment -- Both are considered to be equally important in the improvement of community health status.

3. Problem-oriented approach -- The improvement of community health will not occur until planning and program development are focused on alleviating a specific health problem.

In addition, effective implementation of COPC is dependent upon the center's ability to involve its own staff in the development and implementation of the model. The following sections will review who is involved in COPC, and how health center personnel can be used to carry out the COPC model.

WHO IS INVOLVED IN COPC?

COPC is a dynamic, ongoing, interactive process. Staff of health centers who participate in the process of defining the clinic's service area, identifying and prioritizing their community's health problems and monitoring the results of programs which they develop, will have a greater sense of ownership and commitment to their health center's programs and operations than staff who are excluded from this process. This type of participation also enhances the staff's understanding of the clinic's mission and functions. Effectiveness of health team members is increased when the clinic's role in the larger community is clearly understood.

There are three main groups involved in COPC practice: the community, clinic leadership, and clinic staff. The following sections describe the role of clinic leadership and staff as members of the COPC planning team. Community involvement in COPC activities is discussed in greater detail in Chapter 6.

Clinic Leadership

COPC reflects both the goals and values of the organization. It is critical that the top levels of clinic operation be committed to both the concepts and practice of COPC. While successful implementation of the principles of COPC requires some degree of commitment among all levels of clinic staff, without the full support and commitment of the clinic's leaders very little can be accomplished.

The COPC Planning Team

Teamwork and participatory decision making are important components to successful COPC development. A COPC planning team should include an interdisciplinary mix of the center's top decision makers, including administrators, the medical director, nursing director, director of health education and/or outreach, the mental health director, etc. The traditional organizational roles of these team members places them in the ideal position to offer the leadership necessary for guiding the health center's COPC activities.

In health centers with multiple sites, additional efforts need to be made to involve staff outside of the central office. The following example presents one method for accomplishing this. A two-tiered planning process was developed in a health center to involve staff in each of the center's eight clinics in COPC activities. First, information was gathered from the staff of each satellite clinic. To do this, demographic and mortality data were obtained for the population served by each clinic site and presented to clinic staff during monthly meetings. At this time, staff members were asked to both write down and discuss, from their perspective, the major health problems affecting the community. The input from each site was brought to the central program planning committee which consisted of the coordinators of the eight clinics and the directors of the major health center departments (medical, health education, mental health, administration, etc.). The central committee then developed broad policies and programs for all of the satellite clinics and their individual communities. This committee also assisted the clinic sites in setting priorities and developing programs for their individual communities.

Case Management Teams

A second type of team which is most typical to a primary care practice is the case management team. This team is composed of an interdisciplinary group of health professionals whose purpose is to provide individual patients and their families with comprehensive medical care services. While this mode of primary care delivery is not essential for implementation of COPC, it can optimize the delivery of good primary care to the community.

The following example, adapted from a description by Boufford and Shonubi (1985), illustrates how a case management team's approach to an individual case had an important impact on the broader community. In an urban clinic, a three-year-old child is seen by the nurse practitioner, and through a routine blood test, is found to be anemic. The nurse consults with the pediatrician and further laboratory tests are ordered which show that the child's anemia is due to lead poisoning. At this point, the pediatrician does a full neurologic examination on the child and orders X-rays of the bones to determine the extent of the poisoning. The child is found to have lead deposits in his bones and, thus, will need to be hospitalized for a week to ten days to clear the lead from his system. A team conference is held and three problem areas are identified: the child's lead poisoning, the source of the poisoning in the environment, and the impact on the family in its already stressed economic circumstances -- the psychosocial issues.

A case management team is well suited to work on all of these problems, which any single provider would find overwhelming. A plan is made which includes screening the family's other children for lead levels. The clinic's family health worker goes out to the family's home to take paint samples and examine the cooking utensils which are suspected sources of the health hazard. The social worker, nurse practitioner and the family health care worker then meet to discuss the family's situation. Together, they help develop a plan for supportive counseling and referral to legal services to assist the family in pressuring their landlord to fix some of the housing violations in their apartment building. An additional benefit of solving this problem is the organization of the other tenants in the building to demand housing improvements.

The final step is the reevaluation of the child and his family several months later to see that the interventions have succeeded in preventing further lead toxicity. If not, the team will need to plan another set of interventions and the process will start again. This feedback loop is a critical step of the process. Clearly, all of this could not be accomplished by a single provider who might have treated the child's health problem as merely an isolated case in his or her practice.

The success of this type of cooperative COPC effort is dependent upon all members of the health care team developing skills in negotiation, role definition, leadership, decision making, planning and problem-solving (Boufford and Shonubi, 1985). Health centers implementing the COPC model must include time for development and maintenance of these skills.

THE BENEFITS OF COPC

Perhaps the most immediate benefit of applying the COPC model is the renewed commitment and enthusiasm it can generate among health center staff as they begin to reshape their clinic operations. The model provides the opportunity for staff to see how their activities relate to the overall improvement of community health.

Other benefits are best represented by statements from clinic leaders who have been engaged in the implementation of the COPC model:

> "The COPC model provided us with an objective framework for planning. It allowed us to objectively plan and prioritize the health needs of our communities in a non-threatening environment."
>
> "It (COPC) enabled us to look at our data in a centralized way, or view all of the information we had as one whole."
>
> "It has provided assistance in the development of evaluation methodology."
>
> "It helped to involve our clinic staff in our planning process, and it revitalized our program planning committee."
>
> "A major benefit -- this has lifted morale and enthusiasm of staff members."

Several long-range benefits of COPC have also been identified. The model provides centers with a conceptual framework for development of a strategic planning process. Clinics are provided with incentives to increase or initiate community involvement in their activities. Each element of COPC depends upon a clinic's ability to develop cooperative, mutually beneficial relationships with other health and social organizations in the community. Active involvement with the community as a result of COPC brings additional benefits which include: sharing information and resources that can be useful for program planning and development; improving the clinic's visibility and influence in the community; and stimulating community interest and action towards improving its health status.

The public health gain from using the COPC approach is the initiation of preventive and long-term health promotion programs. COPC's focus is on the community which encourages the development of long-term solutions that go beyond the treatment of individuals.

In COPC, responsibility for the community means a broadening of the traditional notions of medical care and responsibilities of the primary care delivery sites. For example, in a California inner city clinic, where the population is changing rapidly due to downtown expansion and an influx of refugees and the homeless, a team from the University of California at Berkeley, School of Public Health set out to identify the underserved population of this clinic and to describe its health needs. Team members used many techniques to reach this community, including interviews in the parks and shelters where the homeless were living. As they gathered information for the clinic, they also learned more about the homeless and found themselves organizing these impoverished and disenfranchised groups. The result of their efforts was the community developed feelings of empowerment and a renewed interest in the future of the clinic.

In developing countries, there are many examples of COPC that combine the medical aspects of primary care with public health teaching and long-range planning. In the COPC model, as used by a Central American oral rehydration

program, the problem is attacked on many fronts. The community is educated about its environment including clean water, wells with enclosed pumps, covered latrines and perhaps insect control. Mothers are educated about infant feeding. Formula is discouraged and breast feeding is reintroduced as the safest form of infant feeding in areas where clean water is difficult to find. At the same time, the health problem of dehydration is addressed by training mothers and health care workers in the community to mix the rehydration solution which can be fed to infants, avoiding the need for scarce and costly medical treatment.

Both of these examples are representative of COPC. They address the problem in the community where it originates and involve both members of the health care team and the community in providing a systemwide solution.

In times of economic stress, COPC can benefit primary care providers with increased stability and viability of the primary care organization through community support of the health care program. Changes in the primary care practice resulting from COPC can optimize the use of existing resources, improve community health behavior and ultimately decrease inappropriate utilization of services and hospitalization from preventable causes.

OBSTACLES TO IMPLEMENTATION OF THE COPC MODEL

A major obstacle to implementing the COPC model in the U.S. has been the pluralistic health care system. Defining and taking responsibility for a community's health is difficult in a country where there are so many ways to obtain medical care. Community clinics have sought to identify and take responsibility for "underserved" populations both in rural and urban areas with limited availability of medical care services because of financial, geographic, cultural, language or other barriers. In the U.S., individuals with adequate financial means have freedom of choice as to where they seek health care. COPC implies that a primary care practice will take responsibility for <u>all</u> members of the community, both users and non-users.

Another obstacle to the implementation of COPC is that the model relies heavily on the concept of community. Populations in today's society are highly mobile and often transient. Urban areas are far from homogeneous in their needs. High population density, diverse lifestyles, extreme differences in age, ethnicity, culture and socioeconomic factors all contribute to making the identity of the "community" quite elusive.

The existing social, economic and political climate also present a number of obstacles to COPC implementation. Perhaps the most readily apparent is the lack of available staff time in health centers to carry out COPC activities. The overwhelming demand for services makes it extremely difficult to take an already overburdened staff away from immediate patient care needs to engage in the type of assessment and planning activities that are required for COPC.
The limited availability and accessibility of community health data presents an additional obstacle which generally prevents achieving advanced levels of the COPC model. Obtaining demographic data that are specific to the community served by a clinic can often be time consuming, difficult and expensive. Most

health data are not reported by geographic areas small enough to be of much use to an individual clinic. This not only limits a clinic's ability to describe its community, but also limits its ability to monitor changes in the community's health status and the impact of clinic programs.

Finally, many health centers have limited or no financial resources for new program development. This has discouraged many clinics from engaging in any COPC activities because even if they could identify health problems, they would not have the resources to initiate any action to resolve these problems.

OVERCOMING THE OBSTACLES

A committed and highly motivated staff that understands how to use the COPC model can find creative ways to overcome many of the obstacles listed above. Involving the health center's staff, as well as members of the defined community, as part of a COPC planning team can enhance the clinic's ability to carry out the functions of the COPC model. Forming linkages with other community agencies and organizations, particularly local health departments, can be an effective means for a health center to expand its COPC program planning and implementation capacity.

Perhaps the most influential factors in the implementation of COPC are the values of the organization and its leadership. Health centers whose leaders have always had a commitment to address the health problems of their total community (i.e., beyond their clinic's active users), will, with effort, be able to incorporate each of the elements of the COPC model into their existing operations.

At a time of diminishing resources for health care centers, it is extremely important that COPC not be seen as an impractical, unaffordable ideal. It is possible to implement COPC without generating additional costs to a practice. The application of the principles of COPC and the utilization of existing data can actually help a practice plan its resource allocation in a more effective and efficient manner. One of the greatest opportunities for COPC lies in prepaid health programs where there is a financial link between the provision of both ambulatory services and hospital care. Development of COPC programs which promote primary prevention and health promotion can ultimately reduce the need for costly hospital care.

These and other practical considerations in the application of COPC will be discussed in the following chapters. Questions designed to assist the readers in applying these concepts to their health care practice are included in the Site Applications in Appendix A.

CHAPTER 2

STRATEGIC PLANNING AND COPC

COPC, as described in the first chapter, provides an approach to delivering primary medical care to a defined community. Much of the literature on COPC focuses on COPC as a process and has offered methods for the primary care practitioner to look beyond the treatment of individual patients to the broader community. COPC, however, goes beyond the development of a data base and resources to be used to analyze the health status of the community. Not unlike other planning processes, it offers an organized approach to resolving community health problems through the four major elements and staging criteria. This chapter is a discussion of the relationship of strategic planning to COPC.

COPC AS A PLANNING PROCESS

COPC is a plannning process that is designed to improve community health status. Planning for health as defined by Henrik Blum (1983) has three major purposes: the definition of desired improvements, attainment of these improvements, and evaluation of outcomes of implemented planning. The steps that form the basic planning cycle described by Blum are shown in Figure 2.1.

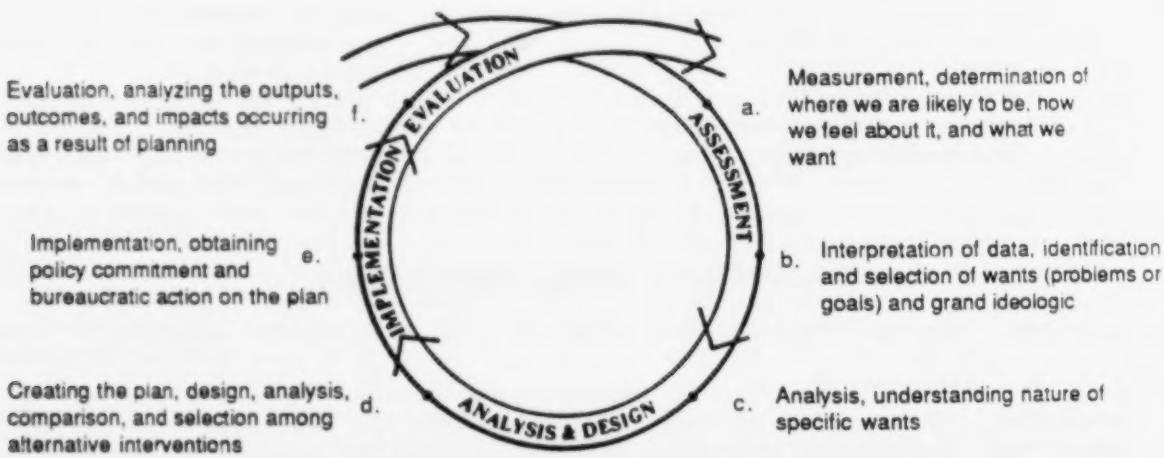
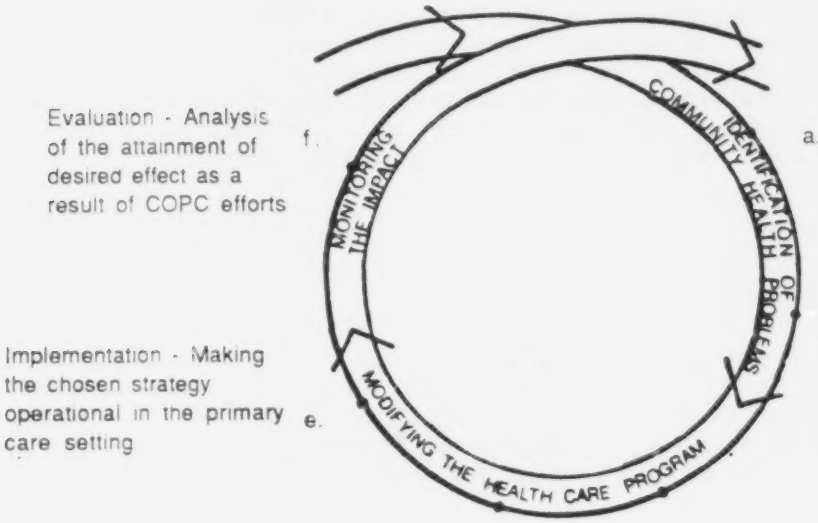

Evaluation, analyzing the outputs, outcomes, and impacts occurring as a result of planning
f.
EVALUATION
a.
Measurement, determination of where we are likely to be, how we feel about it, and what we want
ASSESSMENT
Implementation, obtaining policy commitment and bureaucratic action on the plan
e.
IMPLEMENTATION
b.
Interpretation of data, identification and selection of wants (problems or goals) and grand ideologic
Creating the plan, design, analysis, comparison, and selection among alternative interventions
d.
ANALYSIS & DESIGN
c.
Analysis, understanding nature of specific wants

FIGURE 2.1: ELEMENTS OF THE PLANNING PROCESS*

* entire process and elements guided by the prevalent socio-economic-political outlooks, relevant legislated policies, political environment, resources, governmental structure, and planning expertise

Blum, H.L. Expanding Health Care Hazards: From a General Systems Concept to a National Health Policy. Oakland, CA Third Party Publishing, 1983, p. 215

COPC's purposes are parallel to that of planning with its focus on the alleviation of identified community health problems (definition of desired improvements), modification of the health care program (attainment of improvements), and monitoring of impact (evaluation of outcomes of implemented planning). A better illustration of this parallel may be seen in Figure 2.2 where the COPC process is shown as a planning cycle.



f. Evaluation - Analysis of the attainment of desired effect as a result of COPC efforts

a. Measurement using epidemiological methods as well as other tools to determine status of community

b. Interpretation of data - selection of problems and goals, setting priorities based on social, economic and political factors

e. Implementation - Making the chosen strategy operational in the primary care setting

d. Create, plan, and identify strategies for making an impact on the problem, selection of strategy based on comparison and resources

c. Analysis - further understanding of specific problem

FIGURE 2.2: COPC PLANNING CYCLE

Both COPC and the basic planning process require measurement and analysis of a situation; incorporation of this information into the development of interventions; and a feedback mechanism using an evaluation process to provide the opportunity to adjust actions given the initial situation.

Recognition of the value of COPC as a planning methodology and as an approach for providing community-focused primary care is not enough to make it happen. Implementation requires a commitment to the underlying values of the process by all members of the clinic. Undertaking the responsibility to monitor the community, coordinating and cooperating with other entities, and being willing to change the clinic's practice while being responsive to the community is a

major commitment for any health care provider. Many clinics may currently have a particular project that is similar to COPC in style or other activities which may contain elements of the COPC process. These efforts are to be commended and they may be seen as the groundwork for developing COPC. However, the greatest gains from using the COPC process are achieved when there is forethought about the needs of the community with systematic program planning and implementation as the result. COPC is at its best when it is an operational value of the organization. This is fundamental to the organization's ability to improve community health status.

STRATEGIC PLANNING AND COPC

Strategic planning offers a method of assessing the readiness of the clinic to implement COPC, as well as begin the incorporation of COPC into the clinic's operation. Strategic planning is nothing more than an embellishment of the basic planning process which focuses on the long-range (five or more years) accomplishments of the organization's mission. This approach is commonly practiced in industrial sectors and has recently gained popularity in medical care delivery organizations, especially hospitals. Unfortunately its use in community health centers has not been well developed. The Bureau of Health Care Delivery and Assistance (BHCDA) has encouraged the development of such plans and views the 330 Grant Application Need/Demand Assessment as giving clinics a head start in beginning a strategic planning process. (This will be discussed in further detail later in this chapter.) But, the strategic planning process and the resultant plans have not been viewed as useful activities by community health centers, especially given the uncertain financial positions of most clinics and their seemingly limited power in changing their position.

Current practices of primary care clinics are generally the result of reacting to the dictates and impositions of their environment. The most significant of these is the availability of grant funds from federal, state and private sources. Other environmental factors that shape a clinic's practice are changes in legislation, the cost of insurance coverage and competition from new forms of medical care providers, such as health maintenance organizations and prefered providers. A strategic plan enables the clinic to choose its position in relationship to its environment. This type of positioning is essential if clinic's are to continue to make valuable contributions towards improving community health.

Strategic plans are dynamic. As a clinic and its environment change, the plan should be adjusted to reflect those changes. As with any socially responsive planning process, this procedure relies on the input from all levels of clinic organization as well as from the potential recipients of the clinic's services. The type of involvement and the level of commitment required are no different from that which is required for the COPC process. It does take time. In the past, clinics have felt they could not spare this time and as a result did little or no planning. The degree of participation by both staff and community members will vary depending upon the stage of the strategic planning process and the type of updates and revisions required.

Common practice in many organizations starting a strategic planning process is to hold an organizational retreat to insure participation and consensus around key plan elements. However, this is not necessary to initiate a strategic plan or to keep the plan up to date with changes in the clinic's environment. In fact, retreats can discourage the timely revision of a strategic plan due to their consumption of personnel resources, thus limiting the plan's usefulness as an operational tool. Unfortunately, some organizations choose not to develop strategic plans because they view a retreat as the only vehicle in which the planning process can be legitimately undertaken.

Figure 2.3 outlines the strategic planning process. This diagram is a generalization of the major elements of strategic planning. The components of this process and the degree of detail and complexity involved in carrying it out will vary with the capabilities of the organization.

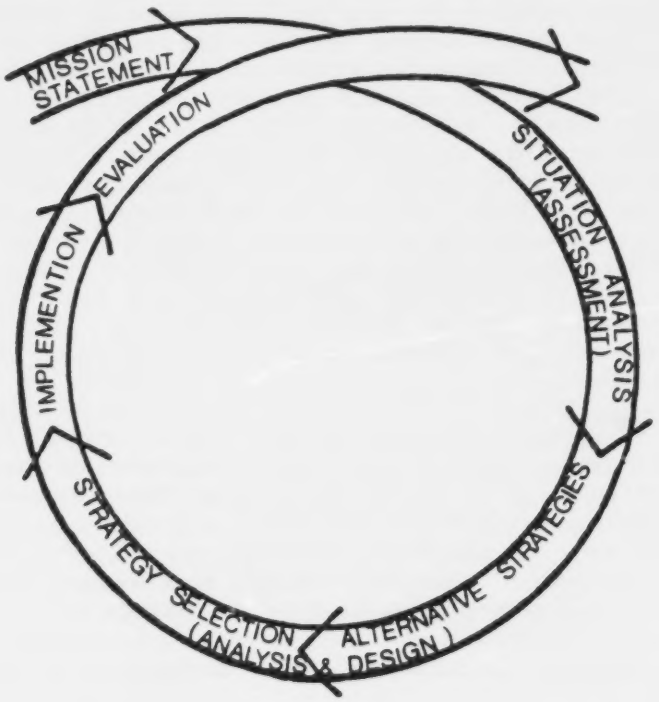


FIGURE 2.3 STRATEGIC PLANNING PROCESS

Initially the mission statement in the strategic planning process provides a detailed description of the clinic, community served and an overview of the services provided. This is a statement of what the clinic perceives it is now doing. Some planners feel that development of the mission statement as a first step in the process inhibits the organization's ability to be open to the reshaping of its mission (Thieme, Wilson and Long, 1981). However, during the process of doing a situation analysis, the mission statement can be adjusted to

address any discrepancies between the clinic's actual position and its desired mission.

Situation analysis provides further detail on the internal operation of the organization as well as the external factors that influence the clinic. Situation analysis has two major components, internal and external. Internal analysis covers the structure and style of the clinic operation, staffing, financial position, physical facility and equipment, quality of services and management information capabilities. Clinics already do much of this analysis as part of their day-to-day management. In addition, portions of the 330 Grant Application such as the Project Profile and Progress Report cover some of the issues that should be reviewed during the internal analysis.

The external analysis includes identification of current and future trends in the demographic and epidemiologic character of the clinic's defined community. This analysis also identifies: unmet health needs of the community; who is likely to use the clinic's services; legal constraints; reimbursement/revenue generating capability; and other providers of services that compete with the clinic.

Historically clinics have placed little emphasis on, or neglected entirely, the external analysis due to the immediate demands of managing internal operations and caring for those patients at their doors. Untended, the external environment presents an assortment of adverse situations that can initiate and aggravate internal problems. Although many of these situations could have been anticipated, unexpected they create an enormous amount of anxiety, limiting the clinic's ability to respond in a manner that optimizes its position, and ultimately compromises the clinic's mission.

The importance of the external analysis cannot be overemphasized. There are many sources of information for the external analysis. Examples include:

- Physician surveys as required by the 330 Grant Need/Demand Assessment that provides information on sources of primary care.

- Associations of clinics or other primary care providers can provide up-to-date legislative information.

- Local or statewide health departments and planning agencies can provide demographic, morbidity, mortality and health services information.

- Public facility licensure agencies can provide services information.

- Surveys or studies that have been conducted by the local university, governmental agencies, or private information services can provide a variety of information. For example, Consolidated Analysis Centers, Inc. (CACI), a private corporation, can provide income, employer, and housing information by ZIP Code.

A summary of internal and external analyses is made through the identification of strengths, weaknesses, opportunities and threats (SWOT) (Kropf and Greenberg, 1984). A SWOT analysis addresses four basic questions:

1. What are our STRENGTHS? For example, we provide the only bilingual services to a community that is 30 percent Spanish-speaking. We are located on a major transportation route.

2. What are our WEAKNESSES? For example, our facility needs major renovation. We do not offer pharmacy services. Our prices are higher than other providers of the same services in the area.

3. What OPPORTUNITIES are available to us? For example, a new residence for seniors is being built in our area. A community-service agency has approached the clinic to share a teen substance-abuse outreach effort.

4. What in our environment immediately THREATENS us? For example, an investor-owned HMO with a history of taking Medicaid patients is moving four blocks from our facility.

In addition to conducting a SWOT analysis, the stability of the clinic's situation should be noted. Has it been changing for the better or worse, and, if so at what rate? Are there internal or external situations that may change the clinic's situation in the future? If so, how will any particular change impact the SWOT analysis or assumptions about the clinic's situation? Based on the situation analysis, the clinic should review the mission statement and adjust it to address the realities of the clinic and the community it serves. This detailed and modified mission statement will then become the clinic's statement of goals.

Strategies are generated based on the clinic's goals and the situation analysis. The strategies that can be generated are unlimited. They can include a change in the mix of services offered, development of new services, modification of the clinic's operation, and creation of new relationships with other organizations. Alternatives selected for serious consideration are determined by the evaluation against the clinic's goals, mission, internal and external situation. Those alternatives that best address the organization's mission are studied further and developed for program implementation.

The final stage of the planning process is the evaluation of those alternatives implemented to assess their influence on the attainment of clinic goals. Evaluation is important to ensure that the clinic's resources are directed to the stated mission. In addition to the evaluation of interventions, a strategic plan requires continuous evaluation and adjustment in response to changes in the clinic's situation. Without continual assessment and adjustments the clinic can put itself back into a reactive posture. The most effective strategic plans are those that anticipate what the future may bring to the clinic.

COPC, STRATEGIC PLANNING, AND THE 330 GRANT

Although the basic elements of COPC contribute to a strategic planning process, the reverse is also true. Clinics that have completed a strategic planning

process should have the information and groundwork necessary to follow through with COPC. Strategic planning and COPC have four areas in common:

1. Both processes are driven by the population served or a defined community and rely heavily on the identification of consumer/community health needs or wants.

2. The clinic's mission and program development is based upon organizational and environmental assessments that include analysis of epidemiologic data and other data resources.

3. Political and social processes are important and, in some cases, more important than quantitative facts in development of alternatives or modifications of the program.

4. Both require inputs from outside the immediate clinic setting as well as involvement and commitment of the board and all clinic personnel.

Currently clinics receiving 330 federal grant monies annually submit to the Bureau of Health Care Delivery and Assistance (BHCDA) an application which includes a need/demand assessment. BHCDA views the need/demand assessment of this application as the first step in strategic planning. Given the parallel between a strategic planning process and COPC, there should also be parallels with the 330 Grant Application process with COPC.

Figure 2.4 illustrates where the elements of the strategic planning process and the 330 Grant Application process contribute to the COPC process.

While all of the components of COPC, as defined in the first chapter, contribute to the strategic planning process, they fall short in terms of the external analysis. Factors such as the regulatory and financial environment, competition among providers for the same community members, and the consumer's geographic mobility and ability to select and change primary care providers are not included in the formula of providing for community well-being. Failure to look at these factors makes the possibility of implementing COPC slim, given the dynamics of the U.S. health care system. A strategic planning process would address this, as well as address the internal organization where commitment to COPC concepts is critical to its success.

The 330 Grant Application process contributes to COPC and the strategic planning process in a much more limited fashion. The project profiles provide a good start on the development of an internal analysis. However, these profiles lack an evaluation of quality of services and an assessment of the physical condition of the clinic and its organizational character which are necessary for strategic planning and useful to the implementation of COPC. The budget and prospective report also contribute to the internal analysis in that, in a strategic planning process, it provides data on the present financial situation of the clinic which ultimately impacts on COPC planning during the program modification phase. The need/demand assessment gives limited data about the clinic's user population and the geographic service area population. (The requirements for community definition and problem identification are

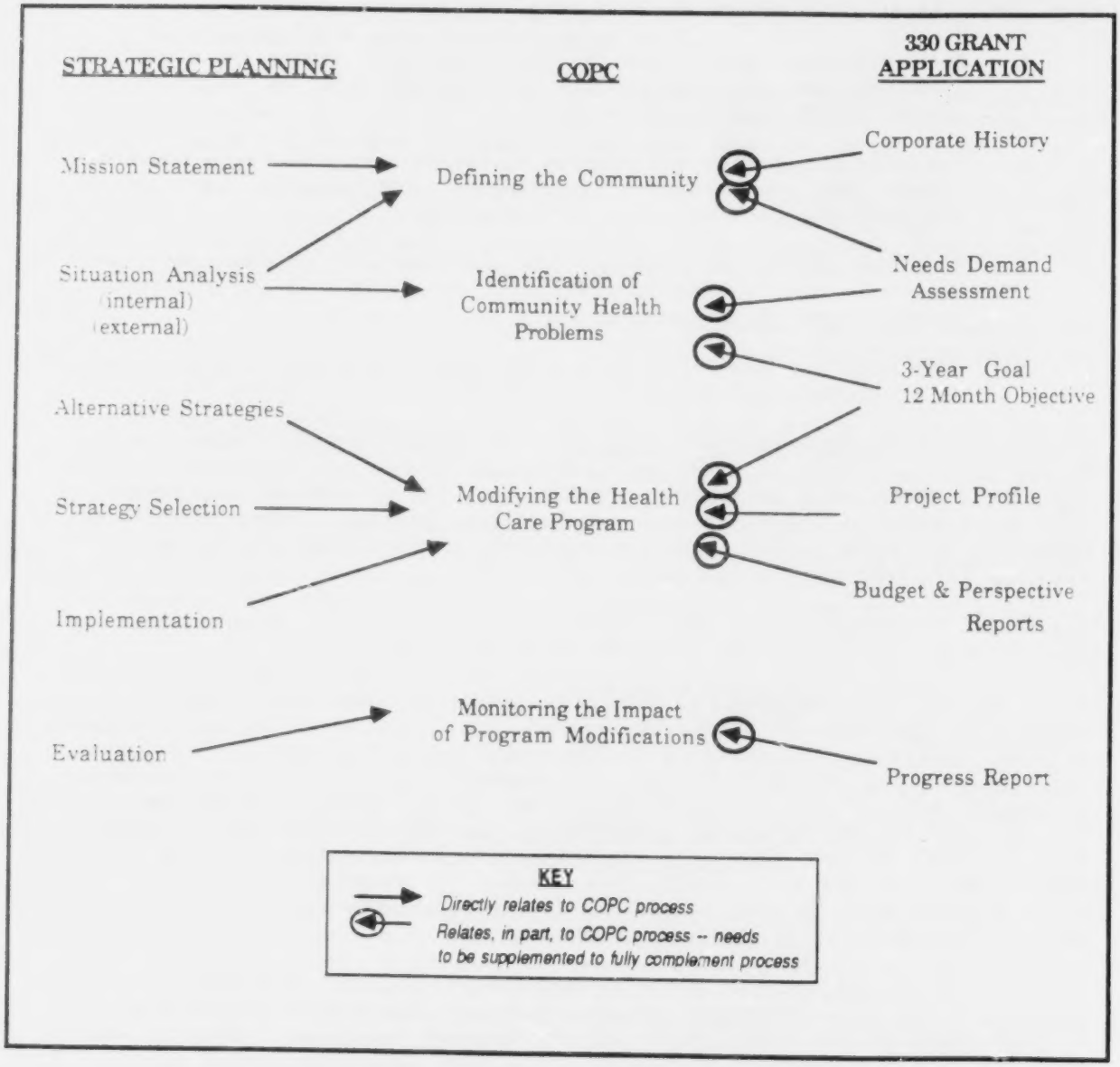


FIGURE 2.4: CONTRIBUTIONS TO COPC FROM STRATEGIC PLANNING PROCESS AND 330 GRANT APPLICATION PROCESS

discussed extensively in subsequent chapters.) The goals and objectives for the grant application can be directly related to the plans for modification of the health care program depending upon the method and intent of their derivation. Although the grant process does not completely satisfy the needs of COPC or a strategic planning process, it does provide a platform in which to begin either process.

As can be seen from the discussion, COPC is a planning process. A health center's strategic plan is integral to the implementation of COPC in that it clarifies the clinic's environment which influences the practice of community oriented primary care. COPC implementation can be significantly enhanced by drawing upon the methods of strategic planning and the information created through preparation of the 330 Grant Application.

CHAPTER 3

DEFINING AND CHARACTERIZING THE COMMUNITY

This chapter is devoted to the process of defining a community which is the foundation for developing COPC in a primary care setting. After completing this chapter the reader should be able to define a community adequately to promote COPC; determine who needs to be involved in the process; and what resources and technical skills may be necessary for defining and characterizing a clinic's community. Finally, this chapter provides a discussion of the issues involved in converting information about a community so that it is useful in gathering epidemiologic data.

DEFINING THE COMMUNITY

The first step toward meeting community health needs is to clearly define and understand the characteristics of the community the health center serves. Defining and characterizing a community is a dynamic, ongoing process which requires the cooperation and understanding of both the clinic staff and the community. Communities are constantly changing and the health center must be able to adapt to these changes if they are to remain active and effective health resources.

The initial reaction of many clinic administrators to this component of COPC is that they already have a defined community for their clinic. After all, federally-funded community health centers are required to specify a geographic service area when filling out their 330 Need/Demand Assessment forms. However, most clinics serve only a small proportion of the people living in this geographic area. While administrators and providers have a general idea of what type of patients their clinic is seeing, they usually do not have a specific definition of the broader community which the center is supposed to be serving. Making such a determination is the first step in COPC.

TYPES OF COMMUNITIES

The community that a clinic serves can be defined in many different ways. The method that is most appropriate for a given clinic depends on many factors including the clinic's location, mission and organizational structure and sources of funding. Even the purpose for which the clinic was established has an influence on the community definition. The following examples describe several different types of clinics and the communities they might choose to define for themselves.

The simplest scenario is that of an isolated region in which the only source of medical care available is a government clinic, a common international situation. Here the community is defined in purely geographic terms as the residents of that clinic's service area have only one place to go for medical care.

Only the clinic's geographic catchment area needs to be defined, that is: How much of the surrounding area is the clinic serving in addition to the town in which it is located? In the United States, the rural sites served by the Indian Health Service are an example of this type of scenario. In fact, some of the pioneer work in community-oriented primary care in this country has been done in Indian Health Service clinics.

In the United States, community clinics in isolated rural areas, although they may seem to be the sole source of medical care, are not always the primary provider for an entire geographic area. Observation of a clinic located in a small town in California's central valley showed that only 13 percent of the population in the clinic's geographic service area identified the clinic as its main source of medical care, even though there were no other doctors in town. The majority of the community's members traveled 15 miles or more to obtain medical care in larger neighboring towns. Clearly, a definition for a clinic's community based entirely on geographic boundaries can be inadequate, even for isolated rural areas of the country.

The type of "community" served by most urban community clinics is likely to be quite different from the scenarios described above. Their "community" will include only a portion of the population of a clinic's geographic service area, and, except for prepaid patients, the clinic will not have the names of its service population. The community may be defined by age (a seniors' clinic), sex (a women's clinic), race (a clinic which serves a predominantly Black population), occupation (a farmworkers' clinic), income (a clinic whose mission is to serve the poor), or special health needs (a family-planning clinic). Often, the various programs of a clinic serve different target populations. For example, one clinic in San Francisco provides outpatient services to the general community, family-planning services for women, and operates a clinic targeted to meet the medical needs of the elderly.

It should be noted that a clinic cannot define its community simply by making a list of the patients it has seen in the last year. While this may be a useful first step in defining the community, it leaves out people not currently coming to the clinic who may have the greatest unmet health needs. This issue is discussed in more detail later in this chapter.

The purpose of a community definition is to specify a target population for which the clinic can concentrate its efforts. Choosing this target population is probably the most important decision a clinic has to make. The consequences of this choice affect all aspects of the clinic's operations, from determining what services to provide and which programs to fund, to even hiring the appropriate person to answer the telephone.

The difficulties facing the clinic in the following example demonstrate some of the issues involved in choosing a community. This clinic was originally founded to serve the Hispanic community in a large city with a moderately-sized Hispanic population and a much larger Black population. This was not a problem initially, but with reduced availability of funding, the clinic realized it needed to broaden the community it served for financial survival. The clinic faced the difficult choice of whether or not to make the changes that would be necessary to appeal to the local Black community, which would

include changing the mix of services, hiring personnel from Black as well as Hispanic communities, and perhaps even changing the clinic's name.

DEFINING THE COMMUNITY FOR COPC

There are two main requirements for defining the community for purposes of promoting COPC. The first requirement is that the definition not systematically exclude persons who do not use the clinic's health services. The second requirement is that the health needs of the community as a whole be addressed in a systematic manner by the health care program, regardless of the type of community for which the health practice has assumed responsibility. These two requirements distinguish COPC from general primary care.

The actual definition of a health center's community is shaped by several determining factors. These include:

1. Geographic
   A geographic boundary is an important aspect of the community definition; however, as a rule, it cannot be the only factor.

2. Demographic
   These characteristics can include ethnicity, age, lifestyle factors, occupation, income, etc. In some cases these will be included in the clinic's mission statement. However, as the community changes, the clinic mission should be periodically reviewed and updated.

3. Financial
   Funding sources will often define which populations they will provide resources to serve. Thus, unless a center has alternative sources of funding, finances can dictate community definition.

4. Territorial Prerogatives
   Determining who is responsible for providing health services to a given community, and who is responsible for caring for those the center cannot reach, are important issues to clarify with the community and other health agencies serving that community.

The challenge to a COPC center is to balance these factors in a way which allows providers to address the health issues which are most pressing to the community. In the current economic climate, funding determinants can often outweigh other factors which would ordinarily shape a clinic's defined population. Unfortunately, the interests of funding sources do not always coincide with the identified health needs of the health center's defined community.

The following questions provide a framework for defining a community for COPC purposes:

- What community should the clinic be serving?

- How does this community differ from who they are actually serving?

The following sections provide a brief discussion of the issues involved in answering each of these questions, as well as suggested methods for answering them.

What Community Should the Clinic be Serving?

It is important that this question be answered by members of the clinic staff, its administration, and the community. It has been found that a broad range of perceptions often exists among clinic personnel regarding who the clinic is actually supposed to serve. These differences, if not identified and addressed early on, will make it difficult for the center to carry out its mission of addressing community health needs.

Methods for answering this question include:

- Reviewing the clinic's mission statement and history (if available);
- Consulting with the clinic's board of directors;
- Discussing this or the following questions at clinic staff meetings or during interviews with staff and providers of the clinic: What population groups would they like the clinic to be serving? Is there anyone they feel the clinic should be serving but is not?; and
- Consulting with community groups or agencies to determine whom they believe the clinic should serve, or what groups they feel are in need of the clinic's services.

To obtain relevant and useful information from both clinic personnel and members of the community, a structured group process, such as a nominal group technique, may be useful. Inclusion of community groups in the process of answering this question will also help to gain their support for future COPC activities. (Further detail on these techniques can be obtained from the list of "Additional Resource Materials" at the end of Appendix C.)

An example which illustrates the importance of a structured group process comes from an urban clinic which was just beginning to develop a COPC program. Various members of the clinic staff were asked whom they felt the clinic was supposed to be serving. It was discovered that some providers believed the clinic's main purpose was to serve low-income families with children. Other members of the staff felt that the clinic was there to serve Southeast Asian immigrants. Still other members felt the clinic should be serving the homeless and were dissatisfied with the clinic's services for this group. Clearly, before the clinic could begin to modify its services and present a cohesive program to the community, it would need to set priorities and help balance the differing perceptions and values among its staff.

To determine how the community definition described above differs from the community the clinic actually serves, the following questions should be answered.

Who Does the Clinic Currently Serve?

In primary care centers not practicing COPC, the "community" is typically defined as the current user population. The importance of answering the above question for COPC is to discover how the clinic's user population differs from the actual community. In this way, the clinic can more readily identify gaps and overlaps in community health services and programs. Ideally, this question should be answered as specifically as possible. For example, if a clinic serves Hispanics and elderly, what proportion of each are seen?

Methods for answering this question include:

- Conducting a random chart review which would identify characteristics of the user populations (including age, location of residence, sex, ethnicity, occupation, income, etc.);
- Interviewing clinic providers and staff to determine what populations they observe in the clinic; and
- Using the clinic's computerized billing system (if available), obtain information such as: location (address), age, sex, source of payment, medical diagnosis, etc.

Once the questions of who the clinic should serve and who the clinic actually serves have been answered, the process of identifying how these two groups differ should be relatively simple. If the population the clinic is serving differs from the population that either the community, the board, or the staff feels it should be serving, a priority may be to define this population further, determining what its health needs are and if the clinic is able to assume responsibility for these needs.

Who is it Practical for the Clinic to Serve?

A final consideration in determining a community definition involves considering who it is practical to serve. This involves assessing funding resources and reviewing the "territorial prerogatives" of other health providers in the area. This question is necessary to define which groups, in addition to the user population, the clinic actually wishes to serve, taking into consideration the resources it has available.

Methods for answering this question include:

- Assessing the clinic's current level of resources;
- Identifying potential sources of funding for new programs; and

- Determining which groups in the community are most likely to use the services of the clinic.

An example demonstrating the importance of this question comes from a small rural clinic. The clinic's administration had decided to expand the clinic's defined community to include a nearby town which was slightly larger and wealthier than the community in which the clinic was located. It was hoped the clinic could attract more clients who had private insurance as a result of the expansion. Unfortunately, after some additional investigation, it was discovered that most people from this town preferred to drive a longer distance to receive health care in a larger city where they could shop, get prescriptions filled and see specialized practitioners, if necessary. In this case, while the defined community ideally would have included residents of this nearby town, it was not practical for the clinic to plan its services for this population.

CHARACTERIZING THE COMMUNITY

Once the clinic has determined what community it is able to assume responsibility for, this community must be characterized, or described, as accurately as possible. This includes determining the number of persons representing various demographic characteristics living in the community. Obtaining exact numbers is not as important as getting an approximate idea of what proportion of the community, each group comprises. For example, if statistics are not readily available, knowing that approximately half of the community is composed of people aged 65 years and older is more useful than simply knowing that there are "a lot" of elderly persons in the community.

As shown in the COPC staging criteria in Chapter 1, there are different levels, or stages, of defining and characterizing the community. These stages range from 0, where no attempts have been made to define the community beyond the user population, to IV, which is the most advanced stage of COPC, where every individual in the community has been identified and characterized.

Attainment of Stage IV in defining the community is usually only feasible if the clinic is an HMO which has access to information on everyone enrolled, or if it has a finite target population such as a migrant farmworker camp. To achieve this stage of COPC, every individual in the community must be identified and characterized for purposes of targeted outreach.

Often it is not practical, or even possible, for a clinic to identify and characterize every individual in its community. This is particularly true in urban areas and in regions where there is a large transient population. Furthermore, in some regions there is simply no easily accessible data base to provide this information. In this case the ideal situation may be to actively characterize and enumerate the community through the use of a data base that includes all members of the community, but does not describe each individual. This would be achieving Stage III of the COPC model. With this information, the community's demographic and socioeconomic status can be described accurately. If it is not possible to enumerate the community in this manner, the

community may be characterized through the use of secondary data sources for an area that closely approximates the clinic's community (COPC Stage II).

The characteristics of a community definition should include the following information:

- some type of geographic boundary;
- descriptor(s) of the population within the boundary the clinic is planning to serve, e.g., elderly, Hispanics, etc.);
- total number (approximate) of people in the community;
- number of people by: age,
  sex,
  ethnic/cultural background,
  languages spoken (if available),
  income levels,
  major occupations, and
  other relevant characteristics; and
- health statistics (mortality, morbidity data and other major health indicators).

  (Note: Obtaining information on health statistics is discussed in detail in Chapter 4.)

Much of this information can be obtained from the U.S. Census. In many cases, however, census data can either be inaccurate (such as for the migrant farm-worker population) or categorized in a way which does not allow a center to compare its users with the broader population. For example, census data are reported by census tracts. If the defined community for a health center does not correspond with these census boundaries, it will be difficult to obtain accurate demographic data on the community actually served by the clinic. Technical assistance may be required to identify and locate the various data sources that would be most appropriate for a clinic's defined community. Appendix D of the Federal 330 Need/Demand Assessment Guide has a listing of agencies or departments which may be of assistance in this process.

No characterization of a community is complete without also understanding the social structures, organizations, values, and political interactions among various groups. If a center wishes to identify and effectively intervene on any community health issue, it must have a solid understanding of each of these variables. This type of understanding is usually a reflection of the clinic staff's participation in community activities, as well as the clinic's role in the broader community. Community involvement and participation in COPC functions are discussed further in Chapter 6.

THE COMMUNITY AS A DENOMINATOR

Once a clinic has defined the community it serves or would like to serve, one further step remains. This involves converting a clinic's community into a measurable denominator, or population of people, to be used as the base number when looking at health and disease patterns. This conversion allows the

defined community to be observed systematically, which aids the planning process. The types of health information that might be available to a clinic to identify the health problems of its community are discussed in the next section of this manual, and the denominator which a clinic might best use with each of these to approximate its community may vary. Identifying the appropriate denominator for a given application is not always straightforward; in fact, this "primary care denominator problem" sometimes has no ideal solution (Hearst, 1986).

Epidemiologic indicators of health status for populations are based on rates -- for example, a death rate for lung cancer, a prevalence rate of diabetes, a teenage pregnancy rate, or an infant mortality rate. Rates, by definition, are fractions with a numerator and a denominator. The numerator of a rate is usually the number of deaths or cases, while the denominator is the total number of people at risk. In vital statistics, the denominator is usually the entire population of a specified geographical area. For example, mortality rates for different causes are available by county in most states. The denominator for COPC would be the clinic's defined community.

The problem for clinics, as discussed earlier, is that the population served by the clinic is unlikely to be adequately defined in strictly geographic terms. At times, information may be available in a form that can be "broken down" by age, sex, race, or level of income. To use such data, a clinic should identify the subgroup(s) which best match its community. For example, an inner city family planning clinic might find that Black women, ages 15 to 44, best approximate its population served, and a farm workers' clinic might focus on the Hispanic population of the rural census tracts of its county. The denominator will not correspond exactly to the clinic's community in either case, but making such an approximation still helps a clinic to gather information relevant to its population.

Clinics that attempt to use data about patients seen in the clinic to determine disease rates in their community will face a different type of denominator problem. Suppose a clinic performs a chart review (or perhaps it uses data from its computerized billing system) and determines that it has had 200 patient visits for diabetes in the past six months. Is this high or is it low? The number 200 is a numerator and may be useful to the clinic in planning, say, to decide whether or not to have a special program for diabetics. But without the appropriate denominator, it cannot be converted into a rate of diabetes in the clinic's community. A denominator that <u>could</u> be used to go with this numerator is the total number of patient encounters during the same period. Thus, if the clinic has 5,000 patient encounters in one year, one can calculate that 4 percent of all visits were for diabetes. This figure could be compared with other clinics or with national data from the National Ambulatory Medical Care Survey. Such a comparison might be of value, especially if it reveals dramatic differences from what might be expected. However, such a comparison will be affected by many factors other than the prevalence of diabetes in the clinic's community. For example, a clinic that serves a community with a normal prevalence of diabetes might have a higher-than-expected proportion of patient visits attributed to diabetes for any of the following reasons:

1) Clinicians see diabetic patients at more frequent intervals than the national average.

2) Patients have fewer clinic visits for other diseases (e.g., in an uninsured population that cannot afford visits for less serious problems).

3) Clinicians use diagnostic or coding criteria which cause them to attribute more visits to diabetes. For example, they may code visits for multiple problems, such as diabetes and hypertension, under diabetes.

4) Clinic patients have a different age distribution than the national average. For example, a family planning clinic would be expected to have far fewer visits for diabetes than a clinic for the elderly. This problem can be avoided by making age-adjusted or age-specific comparisons.

Another denominator that may be useful in addition to clinic user information is the total number of all patients currently being served by the clinic. This is often referred to as the practice population. While most clinics do not know the exact size of their practice, it is possible to make an estimate using the total number of different individuals who have been seen by the clinic in the last year. This information may be readily available from the clinic's computerized billing system. Of course, not every clinic patient will have had a doctor's visit within the last year, so this method will underestimate the clinic's true practice population, on the average, by about 25 to 30 percent. Hearst (1986) discusses several different methods for estimating a clinic's true practice population.

While choosing the appropriate denominators to go with numerators generated from clinic utilization data will help a clinic make the best use of this type of information, it should be remembered that this can only give a clinic information about its current users, not the other members of its community who are not currently coming to the clinic. Thus, the denominator to which clinic-generated data applies is usually not the ideal denominator for determining prevalence of disease in the community. For this purpose, the denominator should come from data which includes both users and non-users of the clinic. While the community may be characterized and defined in different ways, the appropriate denominator will depend on how the community is defined as well as the purpose for which the denominator is chosen.

CHAPTER 4

IDENTIFYING THE HEALTH CARE NEEDS OF THE COMMUNITY

This chapter and the related resource materials should enable a primary care site to use one or more of the described methods for collecting qualitative and quantitative information to generate a list of possible health care problems in the community. Each clinic should be able, at least, to frame the appropriate questions, appreciate the range of possible approaches to collecting the needed information, and effectively guide the efforts of available consultants, resource persons, etc. The end result of this process will be the identification and documentation of one or more specific health problems in the community for which design interventions can be undertaken.

INFORMATION FOR COMMUNITY NEEDS ASSESSMENT

To move a clinic in the direction of COPC, it is essential to know how to assess the health care needs of the community it serves. The first step toward identifying community health needs was described in Chapter 3, which involves deciding who is, and who is not, a member of the defined community. Once this has been determined, the process of systematically identifying the most important health problems of this community can be initiated.

In essence, two types of data are used to assess the health care needs of a community -- qualitative and quantitative. Qualitative data describe the perceptions, attitudes, values and cultural norms of community members, leaders and organizations based upon experience in their community. Quantitative data, on the other hand, are derived from numerical measurements of the characteristics and health status of the community. The two kinds of data, which often yield complementary information, are both vital to the process of implementing COPC, and various techniques are available for obtaining each.

A practical aspect of identifying community health problems involves how data is not only gathered, but how it is organized, stored and maintained. Recent developments in computer health information systems have improved and simplified this process, making far greater amounts of information available to decision makers in far less time than ever before. Appendix B presents an overview of the fundamental aspects of computer information systems for COPC. This appendix provides information on both database management systems and expert systems, including how to begin assessing the information management needs of a community health center.

The choices as to which problems a clinic wishes to address, and how to go about doing so, are difficult and depend on many factors, including the priorities of a given community, the resources available and how amenable a problem is to intervention. Obtaining the best possible information on the extent and pattern of the problems identified will help in this decision.

QUALITATIVE METHODS

The qualitative methods described in this section represent various approaches to collecting the opinions of community members and leaders regarding unmet health care needs in an organized fashion. In many situations, it is helpful to begin the assessment of community health problems with more than one of these qualitative approaches. Two reasons for using qualitative assessments to identify community health problems are:

1. Community members and leaders often have accurate insight into the most pressing health care needs of their community. The knowledge they provide can help focus subsequent efforts for addressing community health problems and subsequent data collection efforts.

2. Qualitative methods can also reveal information and issues that cannot be gleaned through quantitative data collection and analysis. The types of information can include cultural norms, attitudes, values, etc., as they are related to health and the delivery of health care.

The active involvement and support of community members and leaders will be required for both the collection of quantitative information and the subsequent design and implementation of intervention strategies. If these individuals are not consulted and brought into the process at an early stage, their support and cooperation later on is less likely to occur.

Community Leaders

Community leaders should be included in the community forums and other processes used to collect opinions from the community as a whole. They also merit special attention early in the process of information gathering because they are in a position to help or hinder subsequent efforts. Identifying the leaders of the community is the obvious first step in seeking their input. Some key individuals, such as those in official positions, will be readily identifiable. Others, however, who may be equally or even more important, may not be in easily recognized positions of authority and may be more difficult to identify. For more information on how to identify community leaders, see the reference on "Community Data Manual -- Opinion Leaders" (Centers for Disease Control, Center for Health Promotion and Education, 1985) listed in the "Additional Resource Materials" at the end of the manual.

While considering which community leaders to survey, it is important to remember that clinic staff and other health care providers in the area can be an especially useful source of qualitative information concerning unmet health care needs. Health care providers and clinic staff can be an easily accessible source of qualitative information. They are in a unique position to observe the consequences of unmet health care needs of their clients and thus may present some insights on which needs are most pressing. Care should be taken not to limit qualitative assessments to health care providers, as their information generally will be limited to their practice population.

Once it has been decided whom to survey concerning health care needs in the community, there are basically three ways to collect the information: face-to-face interviews, telephone interviews, and mailed questionnaires. These methods vary greatly in their relative ease and expense of data collection. In general, in-person interviews are the most time-consuming, hence the most expensive. Mailed questionnaires are the least time-consuming. On the other hand, many people never return mailed questionnaires, and the benefits of the interactive aspects of in-person interviews are absent.

Regardless of the method of data collection that is chosen, there are two basic types of questions that can be asked: open-end and closed-end. Open-end questions such as, "In your opinion, what are the most important unmet health care needs of the community?", allow the respondent a greater range of responses. However, the responses can be more difficult to tally and analyze. Conversely, with closed-end questions like, "Is teen pregnancy an important problem in the community?", the respondent is allowed only to answer "yes" or "no" and the responses are easy to tally. However, such responses give only very specific information on the exact question asked and give no information at all concerning matters about which one does not think to ask a question. Additional materials (Hulley, et al., 1988) which review the design of questionnaires and interviewing techniques are referenced at the end of this chapter.

Community Members

In addition to surveying leaders concerning unmet health care needs in the community, the clinic might also want to collect qualitative information from community residents. Again, there are a number of possible approaches to collecting such information. A commonly-used approach is to hold one or more community forums or public meetings to which all community members are invited. At such meetings the residents of the community are free to express their views concerning what health care problems are most important to them and to present their priorities for improving health care delivery. There are several well-tested techniques for collecting information in an organized fashion in such community meetings. Further information on organizing community meetings and collecting qualitative data also is referenced at the end of the manual under "Additional Resource Materials." It is important throughout this process to keep in mind that the individuals who choose to attend the community forums may not be representative of the community as a whole.

QUANTITATIVE APPROACHES

As discussed above, surveying community leaders and members concerning their perceptions of the community's unmet health needs is important because the information generated and contacts made can help to direct and facilitate future efforts. However, qualitative information alone can sometimes be misleading. There may be serious health problems in the community that are accepted as "normal" because the community has no idea that an improved state is possible. In other circumstances there may be quantitative evidence indicating the presence of a serious health problem of which the community may

not be aware. Quantitative methods are also used to document the prevalence of the health problems identified by qualitative methods; this is particularly helpful when seeking program funding and developing political support.

For the purposes of this discussion, approaches to quantitative data collection will be divided into three categories: those applicable to the population of individuals using the clinic, those that encompass clinic users plus their household/family members and those that apply to the whole community, irrespective of whether they are currently using the clinic.

Clinic Users

It is important to understand that information pertaining to the users of the clinic is limited in its usefulness in assessing the unmet health care needs of the community. Individuals using the clinic are a self-selected group and are almost certain to differ in important ways (age, race, socioeconomic status, prevalence of various medical conditions, etc.) from those members of the same community who receive medical care elsewhere or not at all. Thus, information concerning the health care needs of the clinic patient population, no matter how complete or accurate, cannot be extrapolated to the community as a whole. As discussed in the previous chapter on defining the community, rates are not easily calculated, making it difficult to define an appropriate denominator when considering a population of clinic users. Bearing these problems in mind, it is still possible, in selected instances, to derive useful information from a population of clinic users, particularly in areas of behavioral risk factors (e.g., smoking, alcohol abuse or seat belt use), immunization status, tuberculosis screening and occupational illnesses and injuries.

There are several ways to collect information on the prevalence of one or more health care problems among clinic users. These include chart reviews, patient surveys, and analysis of computerized records. If the clinic has a computer for billing or other purposes, the possibility of using the computer system to record important medical, demographic, and other data (e.g., date of birth, race, sex, known medical problems and chronic conditions, medications taken on an ongoing basis, occupation, and use of alcohol, drugs, tobacco, etc.) for all patients should be investigated. The existence of a computerized data base makes it much easier to assess the health status of the patient population. In the absence of a system of this kind, it will usually be necessary to perform a chart review or a patient survey, or both, to answer one or more specific questions about the patient population. The most appropriate method in a given situation depends largely on the consistency and accuracy with which information is recorded in medical charts.

Non-Clinic-Using Family Members

To extend the assessment of the community's health care needs somewhat beyond the population of clinic users, systematic collection of information on the non-clinic-using family and household members (spouses, children, parents, grandparents, etc.) of the clinic users might be considered. Again, it is important to remember that these individuals are unlikely to be representative

of the community as a whole. Instead of collecting information about behavioral risk factors, occupation, teen pregnancy, or whatever else is being studied only about clinic users, the same information would be systematically collected about their non-clinic-using household members as well. Thus, for each clinic user a detailed picture of other household members, their demographic characteristics and health status could be assembled. Information about non-clinic using household members could be kept in the clinic user's chart, and charts of multiple clinic users from the same household would be linked to facilitate analysis. If the clinic has the appropriate computer hardware and software, this data storage and linkage should be computerized.

The Community at Large

Ideally, the implementation of COPC requires having or collecting data on the health care problem of interest for everyone in the defined community, regardless of where or if they obtain health care. Given the wide array of health care providers in most areas, and the difficulty of collecting health status information, this task would seem to be unachievable without enormous resources and technical expertise. However, by using data collected for other purposes and/or a little ingenuity, it is frequently possible to accumulate the information needed in a given situation. The best place to start is often with one of the many governmental organizations that already may have collected some of the information.

PRE-EXISTING DATA SOURCES

Many federal, state, county, and municipal agencies collect information pertaining to a wide array of health care problems. Some of the data sets available from such agencies can be used to generate ZIP Code and/or census tract-specific information, while others are useful only in examining a problem at the county, state, or national level. Given comparable data about the clinic's service area, information of the latter type can serve as an important basis for comparison (i.e., seeing how the clinic's service area compares with the county or state as a whole). However, in most instances, it is those preexisting data sets that can be broken down by ZIP Code or census tract that will be most useful.

Data sets that are uniformly available for a given area and that frequently can be broken down in this way include information from the U.S. Census, birth certificates and death certificates. In many areas, other useful ZIP Code or census tract-specific data sets exist. For example, a regional tumor registry can probably provide information concerning the incidence of various forms of cancer in the service area. If the state collects information on hospital discharges, it can probably make available data for all hospitalizations of individuals living in a given ZIP Code in the state. Similarly, the county health department can probably provide ZIP-Code-specific information concerning communicable and sexually transmitted diseases.
Table 4.1, Health Status Indicators Frequently Used to Describe Mortality and Morbidity, provides examples of the type of community health indicators that a COPC planning team may find useful. This list is not comprehensive -- it is

presented as an illustration of the types of data frequently used to assess community health for COPC.

Data on these indicators are published through various sources including the Monthly Vital Statistics Report from the National Center for Health Statistics, County Fact Books, and Health, United States. If the information is needed for a small geographic area such as a city or neighborhood, it may be necessary to contact the local health department. A list of sources of health data is also included in the Federal 330 Grant Application Manual, Appendix D of the Need/Demand Assessment.

In addition to the data sources described above, there may be other sources of health-related data within the community. In particular, schools may collect information pertinent to a variety of health care issues, including levels of immunization, vision and hearing impairment, etc. Special community-based screening programs for conditions or diseases, such as lead poisoning or tuberculosis, may exist and be useful sources of information. Depending upon the health care issues examined in the clinic's service area, one or more of these preexisting data sets can be of tremendous help. Furthermore, the information is generally available fairly rapidly and at little or no cost. Examples of how these data sets can be used are provided at the end of this chapter.

COLLECTING COMMUNITY-BASED DATA

For a given health care problem, pre-existing data sets may be unavailable or inadequate. In this situation it will be necessary for the clinic to collect information to assess and document the extent of the problem within the particular service area. Collection of data in the community using a community survey is an expensive, labor-intensive and technically sophisticated undertaking. Fortunately, for many health problems of interest, the information can be collected without resorting to a community survey.

Several concrete examples of how to approach data collection at the community level are given in the examples section at the end of this chapter. The general principle is to look for efficient ways of finding the subpopulation at risk for a given health care problem within the community. Thus, if one wants to know why pregnant women are not receiving adequate prenatal care, it would be more efficient to identify and interview these women during their hospitalization for delivery, rather than to conduct a community-wide survey. Similarly, to assess the unmet health care needs of the homeless, it is most efficient to seek information at the shelters and meal-sites that serve the homeless. While some health care problems and some subpopulations within the community may not be amenable to this type of approach, it is always important to look for such shortcuts to data gathering before considering surveying the entire community.

In general, community surveys are an inefficient and expensive way to collect information about a given health problem, as well as being beyond the scope of what most clinics are able or willing to undertake. The available methods of

No.	Description of Indicator	Numerator (x)	Denominator (y)	Expressed per Number at Risk
	Mortality			
1	Infant Mortality Rate Crude; specific for race, socioeconomic area, birth weight, cause of death, etc.	Number of deaths under one year of age reported during a given time interval	Number of live births reported during the same time interval	1,000
2	Crude Death Rate Crude; specific for age, race, sex, socioeconomic area, etc.	Total number of deaths reported during a given time interval	Estimated mid-interval population	1,000
3	Cause-Specific Death Rate Crude by cause; specific for age, race, sex, socio-economic area, etc.	Number of deaths assigned to a specific cause during a given time interval	Estimated mid-interval population	100,000
	Morbidity			
4	Incidence Rate Crude by cause; specific for age, race, sex, socio-economic area, etc.	Number of new cases of a specified disease reported during a given time period	Estimated mid-interval population	Variable 10^x Where x = 2,3 4,5,6
	Natality			
5	Fertility Rate Crude; specific for age of mother, race, socio-economic area, etc.	Number of live births reported during a given time interval	Estimated number of women in age group 15-44 years at mid-interval	100
6	Low Birth Weight Ratio Crude by cause; specific for age of mother, race socioeconomic area, etc.	Number of live births under 2,500 grams (or 5 lbs.) during a given time interval	Number of live births reported during the same time interval	100

Source: Adapted from G.E. Dever "Health-status indicators and indices" in Community Health Analysis, Rockville, MD: Aspen Publishers, pp. 189-192, 1984.

Primary Source: Descriptive Statistics, Rates, Ratios, Proportions, and Indices, U.S. DHEW, PHS, Center for Disease Control, Atlanta, GA., pp. 3-8

TABLE 4.1 HEALTH STATUS INDICATORS FREQUENTLY USED TO DESCRIBE MORTALITY AND MORBIDITY

conducting a survey (door to door, over the telephone, or by mail) vary greatly in their relative expense and reliability. All of them require, at a minimum, expertise in survey methodology, substantial planning and an adequate staff to collect and analyze the data. Detailed information about conducting surveys is available in the books on survey methodology cited in the list of "Additional Resource Materials" at the end of the manual. It is also advisable to consult with someone who has had experience in community surveys before actually undertaking such an activity.

SETTING PRIORITIES

Up to now, this chapter has concentrated on the process of identifying and documenting health problems in the community. The key elements in the process are the use of qualitative or quantitative methods, or both, to identify areas of potential problems. At the end of this process, a list of health problems in the clinic's community will have been identified and documented.

In a world of unlimited resources, the clinic ideally would try to address all of these problems but, realistically, clinics will probably have to be selective and try to deal with the problems one or two at a time. This means that another step is necessary before beginning to design interventions: deciding which problems to tackle first. The setting of priorities is something each clinic has to do for itself. This manual can only suggest some of the criteria that might be used in making such decisions.

Some of the questions that should be considered about each health problem are:

- **How important is the problem?**

  The relative importance of a problem depends on the needs and circumstances of both the clinic and the community. If lead paint poisoning of toddlers and athlete's foot in the male teen population are both identified as common problems in a certain community, seemingly there should be little doubt as to which is more important to try to do something about first. The importance of different health problems can be measured by both qualitative and quantitative methods. Qualitative measures might include asking community members to rank a list of problems by order of importance. Quantitative measures would include such objective data as mortality rates, days lost from work, number of clinic visits and years of productive life lost.

  It is often useful when working with quantitative data to prepare a chart comparing data on health problems in the community to those of nearby or similar communities, using county, state, regional or national statistics. Table 4.2 presents an example of how information gathered for comparative purposes can be organized:

Health Problem Item	Defined Community Rate	Comparable Community Rate	County Rate	State Rate	National Rate
1.					
2.					
3.					
.					
.					
.					
.					
Example	Emeryville/ N. Oakland California	W. Oakland California	Alameda California	California	United States
High Infant Mortality					
Infant Mortality Rate (deaths per 1000 live births, 1985)	15.7	18.3	10.2	9.4	10.6

TABLE 4.2: COMPARATIVE DATA CHART

Care must be taken when comparing statistics to assure that the comparisons are valid and bias is not introduced because dissimilar populations are compared. Always keep in mind that a combination of both qualitative and quantitative measures is ideal for identifying community health problems. More complete information on comparing rates and trends may be found in the Problem Identification Manual (Centers for Disease Control, Center for Health Promotion and Education, 1984), referenced under "Additional Resource Materials" at the end of the manual.

What can be done about the problem?

A clinic should choose problems to address about which it can realistically expect to make a difference, including acting as a catalyst for some other agency to address the problem. For example, cancer of the pancreas is an important cause of death, but because its cause is unknown, early detection is neither possible nor shown to be of benefit, and there is no effective treatment. A clinic that attempts to intervene on this problem sets itself up for almost certain failure.

- **Does the clinic have the resources to tackle the problem? (Or, can it obtain the resources it needs?)**

  A clinic may find that drug abuse is perceived as the top problem in its community and the importance of this problem is confirmed by quantitative data. An effective program to deal with drug abuse in the community, however, may be beyond the financial resources of the clinic. How or whether the clinic decides to tackle this problem may depend on the availability of external sources to fund such a program or on the clinic's ability to stimulate others to address the problem.

  An urban clinic in the San Francisco Bay Area identified two groups in its service area with major unmet health needs: the homeless and the elderly. An important factor in the clinic's eventual decision to focus first on the elderly was that more of them have third-party medical coverage (i.e., Medicare), so that the clinic would better be able to afford expanding services to address the health needs of this group.

- **How does the problem fit with the clinic's original purpose?**

  This last question may be the most important consideration of all. Infant mortality may be an important problem, with known strategies for intervention and with resources available to fund intervention projects. Nevertheless, it would not be appropriate for a clinic designed to serve the elderly to focus on this problem. More difficult questions will come up when clinics founded to serve one ethnic group consider undertaking programs that would largely serve another group, or when clinics founded to serve the poor consider programs designed to serve an insured population. Such dilemmas can only be resolved by open discussions among clinic staff and management, the board of directors, and the community. The end result should be the selection of a problem or problems that the clinic will further investigate to develop an intervention plan.

EXAMPLES OF IDENTIFYING COMMUNITY NEEDS

The following examples show how these principles are applied in a variety of health center settings.

Example 1

A survey of community social service agencies and health providers indicates that high infant mortality may be a problem in the clinic's service area. Before trying to tackle this problem, quantitative data must be collected for three important reasons. First, one wants to be assured that the problem is of sufficient magnitude to warrant the clinic's intervention. Second, the data collected will assist in deciding what strategy is likely to be most effective in addressing the problem (e.g., Should a special prenatal care clinic be

developed; community outreach be initiated; nutritional supplements for infants be provided; etc.?). Third, the data will serve as a baseline against which to measure the impact of the selected intervention(s).

In this example, the first step is relatively simple: the local health department should be able to provide the infant mortality rate in the clinic's community and to compare it to the national average. The second step, obtaining data on the possible reasons for high infant mortality, is more challenging. Lack of adequate prenatal care is one possible contributor to high infant mortality that a clinic might try to address. There are many approaches to collecting quantitative data on patterns of utilization of prenatal care. Possibilities include:

(a) reviewing the clinic records;
(b) examining secondary data sources;
(c) conducting a survey.

Each of these approaches and their suitability in providing data for the problem of high infant mortality are described below.

(a) Reviewing the Clinic Records

As previously discussed, a review of clinic records is often a relatively easy and inexpensive way to collect data, although such a review rarely, if ever, tells much about non-clinic users. In this case, a review of the charts of pregnant women being followed in the clinic, either for prenatal care or for other medical care could be conducted. A review of this kind should tell about the utilization of prenatal care by women seen at the clinic (trimester of initial prenatal visit, frequency of visits, proportion enrolled in WIC, etc.) which might help to improve their care. However, it is obvious that such a review cannot indicate how many women in the community are getting no prenatal care or what the barriers are to their obtaining care. Thus, in this case, reviewing clinic records would not provide the data needed.

(b) Examining Secondary Data Sources

Data collected by governmental agencies represent another possible source of inexpensive or free information that is easy to obtain. As previously discussed, the usual problem with data sets of this kind is that they frequently do not contain the exact information needed, and information on the specific subgroups of concern cannot be separated from the larger population. In such instances, it may be possible to obtain the required information from a preexisting data source, for example, birth certificates. Not only do birth certificates contain information such as place of birth and the mother's age, race, and place of residence, but in virtually all jurisdictions birth certificates also contain information concerning whether or not the mother received prenatal care and in what month of the pregnancy it began.

By checking with the county or state vital records department, it can be determined if such information is recorded routinely on the birth certifi-

cates. If so, the vital records department could easily provide answers to the following questions concerning births to women residing in the census tracts or ZIP Codes near the clinic:

(1) What proportion of births are to women who have had no prenatal care?

(2) What proportion of births are to women who have not had prenatal care until the third trimester?

(3) What are the race and age characteristics of mothers who are not getting prenatal care, and how do they differ from women who are getting such care?

Thus, in this situation, much of the information needed can be obtained easily and inexpensively from preexisting data sets. There are, however, certain drawbacks and inadequacies associated with using birth certificate data to assess the problem of inadequate prenatal care:

(1) There is frequently at least a six-month to a year delay in getting access to birth certificate data.

(2) Even in jurisdictions that collect data pertaining to prenatal care on birth certificates, this information may be missing or erroneous on many of the birth certificates.

(3) While this information may have been collected and, in theory, is available, it may require considerable effort and persistence to gain access to it. In addition, the data may not be reported and broken down in a way that would be most useful.

(4) More details concerning the characteristics of women failing to get prenatal care and their barriers to care may be required to develop effective intervention strategies.

For any or all of these reasons, the clinic might want to supplement the information available from birth certificates by conducting a survey.

(c) Conducting a Survey

To collect more detailed information concerning the women in the community who are not receiving prenatal care and to determine what the barriers to that care are, a survey of these women could be conducted. A survey would permit the asking of detailed questions concerning the relative importance of various potential barriers to getting prenatal care--financial, transportation, lack of information, etc. What is the most efficient and inexpensive way to conduct such a survey? Clearly, door-to-door surveys or random digit dialing telephone surveys would be very expensive and extremely inefficient ways of collecting information from pregnant women or women who have recently given birth. Contact would have to be made with enormous numbers of people to find a handful of such women. Alterna-

tively, the survey could be conducted at one or more hospitals in the clinic's community where women without insurance coverage give birth. A survey conducted at these hospitals would include virtually all such women because most pregnant women not receiving prenatal care are likely to deliver at such hospitals. Such an assumption can be verified by the vital records department to provide data on distribution by place of birth of babies born to mothers not receiving prenatal care. Furthermore, arrangements could be made to identify such women and to interview them conveniently and inexpensively during their hospitalization for childbirth.

The data collected in a survey of this kind may be useful in several ways. With such information, the clinic is in a better position to design appropriate strategies for targeting services at those women at greatest risk of failing to receive prenatal care. At the same time, documenting the extent and causes of the problem in the community may be useful in applying for funding to develop special programs addressing the problem. Finally, similar methods, such as the review of vital statistics data and survey results, can be used to assess the impact of interventions on the number, proportion, and characteristics of women giving birth without prenatal care and perhaps make further refinements in these interventions. (See Chapter 5, Modifying and Monitoring the Health Care Program.)

Example 2

As a second example of how to assess health care needs in the community, suppose that a certain clinic is interested in evaluating the health care problems of the homeless population in its area. Before deciding how best to go about determining the unmet health care needs of the homeless, some preliminary information is needed concerning how many homeless there are and the number and location of facilities providing them with shelter, food, and social services. This information is probably most readily available from city or county agencies. At the same time, these agencies may have some insights and data concerning the health care needs of this population. Next, the question is again faced of the best method to acquire the information needed. As in the previous example, the clinic records are likely to be of only limited use. Not only may it be difficult to identify which clinic patients are homeless, but the homeless not being seen in this clinic may have very different health care needs/problems than those being seen. Secondary data sources are also unlikely to be helpful in this situation unless a local agency has been focusing on this issue and collecting data relating to the health problems of the homeless.

Assuming that useful, preexisting information is not available, the most efficient and least expensive way to get the data must be determined. Working with local agencies and with the shelters and meal sites for the homeless, a survey could be conducted of health problems and health care needs of those who use the shelters and meal sites. After devising a questionnaire for collecting the desired information, a combination of community volunteers, clinic staff, shelter- and meal-site staff and local agency personnel can be trained to administer the survey. Some of the homeless themselves could actively assist

with data collection. Needs that might be assessed in a survey of this type include outpatient medical services, dental care, optometry services, prescription medications, pre-natal care, alcohol and drug abuse treatment, etc. At the same time, the existing barriers to obtaining various services can be determined and when and where new services should be provided to make access easier for the homeless. Based on this information, and working with local governmental agencies, the clinic should be in a position to plan and implement new services or changes in existing services that address unmet health care needs.

Example 3

As another example, a clinic wants to know whether women in the community are having Pap tests performed at intervals recommended for prevention of invasive cervical cancer. To start, a chart review of women seen in the clinic would be helpful to determine if the health care providers in the clinic are obtaining Pap smears from patients at appropriate intervals. The chart review will not, however, indicate how many women in the community who do not come to the clinic are going unscreened and, as a result, may be at risk of developing invasive cervical cancer. To answer this question without resorting to a community survey, data could be requested from the local or state tumor registry concerning the prevalence of cervical cancer in the clinic's service area. Given census data, the overall age- and race-specific incidence of cervical cancer could be calculated for the service area. By comparing the incidence rates in the clinic's service area with rates from other areas, it could be determined whether rates in the clinic's community are elevated, suggesting that screening is inadequate. A similar approach based on hospital discharge data from the state also might be feasible. If the state collects hospital discharge data, rates of hospitalization for invasive cervical cancer can be calculated for women living in the ZIP Code areas that the clinic serves and compared with cancer rates in other communities.

Example 4

A final example will serve to illustrate a different approach to a community health problem. Suppose that a qualitative assessment of health problems in the community suggests that unintended teenage pregnancy is a major concern. How might a clinic go about collecting quantitative information on this problem? In this case, it is worth beginning with preexisting data sources. As previously discussed, the mother's age and ZIP Code or census tract of residence are routinely recorded on birth certificates. Therefore, it should be relatively easy for the local vital statistics office to provide information concerning the annual number of live births and fetal deaths for teenage mothers living in a given area. Comparing these data with U.S. Census data on the total number of girls and women in various age groups in the same area, it is possible to calculate the rate of live births and fetal deaths among teenagers in this area and compare it with those in other areas. If desired, these calculations can be refined by doing separate calculations for various age (e.g., below age 16 and age group 16 to 19) and race strata.

While the vital statistics data concerning live births to teenagers are important in evaluating unintended teenage pregnancy in the community, such information does not tell the whole story because many teenagers may elect to terminate their pregnancies with induced abortion. Nationally, it has been estimated that 50 percent of teen pregnancies are carried to term and 50 percent are terminated. Based on this, an approximate teenage pregnancy rate could be calculated by multiplying the teenage live birth and fetal death rate by a factor of two. However, it is important to remember that there are differences in the frequency with which teenagers choose to complete versus terminate their pregnancies, depending on factors such as race, socioeconomic status, religion, geographic setting, etc.

It may be important to attempt to supplement the live-birth data from vital statistics with information from local providers of abortions. By determining the number of abortions performed on teenagers from the area in question and adding it to the number of live births and fetal deaths, a better estimate of the number of teenage pregnancies (excluding spontaneous miscarriages) can be determined. However, collection of the abortion information might be time consuming and expensive, particularly if there are many providers of care in and around the area under study. In addition, teenagers who leave the area for abortions would be missed using this search procedure.

There are several other ways in which data concerning teenage pregnancy can be collected, particularly if the major interest is in looking at what is happening over time (i.e., temporal trends). Is the problem getting worse, better, or staying the same? For example, by working with the local school district, one can look at the number of high school girls who drop out each year because of pregnancy, and the characteristics they share can be observed. Similarly, if the school system has a special program for pregnant students, statistics can be examined regarding the number of students in this program each year, where they come from, their age distribution, etc. It must be remembered, however, that both of these approaches yield information only about those pregnant teenagers who elect to carry their pregnancies to term rather than seek abortion. In addition, teenagers who are not in school, who may be at particularly high risk of becoming pregnant, will not be included in these data sets.

Also of value is looking at trends over time in the number of teenagers coming to the clinic for pregnancy testing and counseling. Data of this kind would be even more useful if they can be integrated with data from other health care providers in the area who offer such services, thus developing a more comprehensive picture of what is happening in the community. Given the over-the-counter availability of home pregnancy test kits, this approach may miss some individuals, although it is likely that most pregnant teenagers will end up being tested again by a health care provider. As in the other examples cited, these approaches are complementary, not mutually exclusive. To put together a comprehensive picture of what is taking place, multiple approaches may need to be used. In this way the extent to which a given health problem exists in the clinic's community will be documented, the information necessary for planning an intervention strategy collected, and the groundwork for a subsequent evaluation of the impact of any intervention laid.

CHAPTER 5

MODIFYING AND MONITORING THE HEALTH CARE PROGRAM

The final stages of the COPC planning cycle involve modifying the health care program and monitoring the impact of program modifications. This chapter combines the discussion of these processes as they relate to developing community oriented primary care. Upon completion of this chapter the reader should have an understanding of how to: identify precursors and consequences of problems; set goals and objectives; recognize the importance of developing evaluation measures; and identify, select, and carry out intervention strategies.

PLANNING HEALTH CARE PROGRAMS FOR COPC

As illustrated in the COPC planning cycle, Figure 2.2, the final two elements of the COPC model are modifying the health care program and monitoring the impact of program modifications. These two elements have been combined in this chapter because of the interdependency of both processes. Results of an intervention cannot always be determined after the program is underway. Program monitoring is most effective when it is included during the program development process. Just as with the other components of COPC, the understanding and input of the community are the foundation for these final elements. The best decisions on program changes or development cannot be made without guidance from those for whom they are intended. The preliminary work for program modifications was accomplished during the identification of community health problems discussed in Chapter 4. A thorough analysis of the problem selected to be addressed moves the clinic into the final stages of the COPC process.

PROBLEM ANALYSIS

Conducting a problem analysis involves identifying both the contributing causes, or precursors, of a given problem as well as its consequences. This process is best carried out in a systematic manner by reviewing available literature and drawing on the opinions and expertise of community members, health and social service personnel and other individuals who could provide insight to the problem at hand.

The importance of conducting a thorough problem analysis cannot be over-emphasized. There are few, if any, health problems that result from a single cause or that have only one result. Even for diseases that are caused by a single agent, there is a series of events which leads to exposure to that agent. When the social, political and financial impacts of a single health problem are considered in addition to the impact on the individual, it becomes clear that most problems have multiple consequences. A problem analysis will illuminate the factors that must be considered before an appropriate, effective program modification can be made.

The following example illustrates how a health center used a problem analysis to guide its program development process. A clinic learned that the community is concerned about the number of low birth-weight infants born among its residents. After finding data which show a higher-than-average incidence of low birth-weight infants, the clinic selected low birth-weight infants as the problem to be addressed. Before developing an intervention, the clinic must first identify the factors that contribute to causing low birth-weight and determine the consequences to the community. By convening community members, health and social service personnel, and representatives of several community organizations, the clinic identified a series of precursors and consequences to the problem of low birth-weight infants, as illustrated in Figures 5.1 and 5.2.

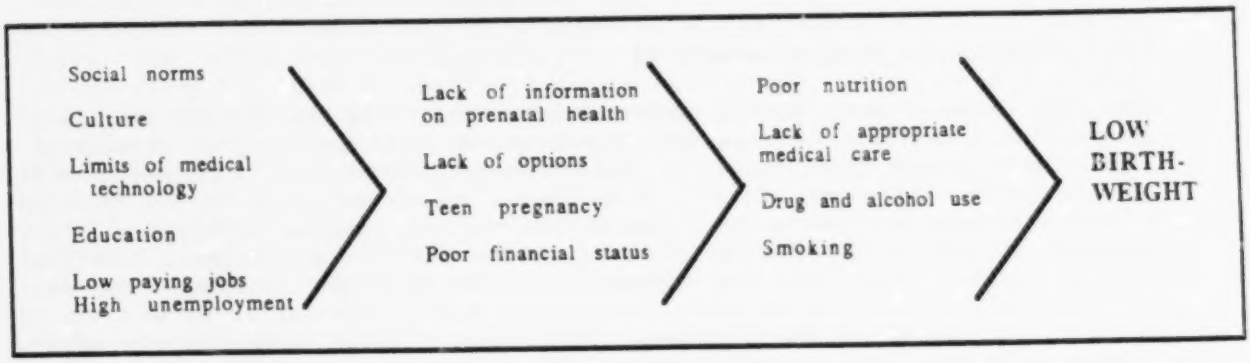


FIGURE 5.1: FACTORS CONTRIBUTING TO LOW BIRTH-WEIGHT INFANTS

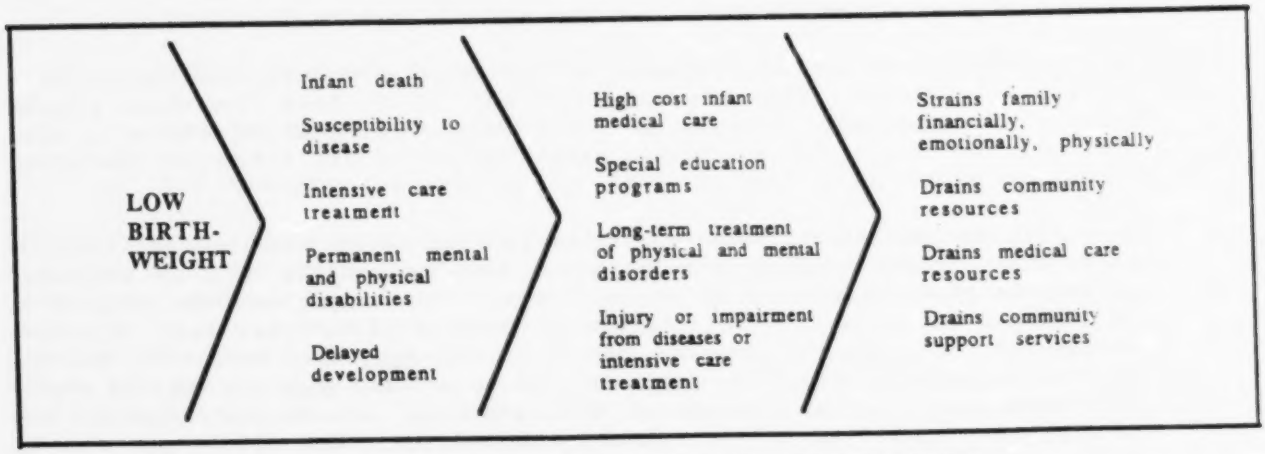

LOW BIRTH-WEIGHT
Infant death
Susceptibility to disease
Intensive care treatment
Permanent mental and physical disabilities
Delayed development
High cost infant medical care
Special education programs
Long-term treatment of physical and mental disorders
Injury or impairment from diseases or intensive care treatment
Strains family financially, emotionally, physically
Drains community resources
Drains medical care resources
Drains community support services

FIGURE 5.2: CONSEQUENCES OF LOW BIRTH-WEIGHT INFANTS

Completing the problem analysis in this manner allowed both the community and the clinic to clearly identify the many issues involved in dealing with this health problem. More detailed information on how to conduct problem analyses is available in Problem Analysis: An Analytical Tool for Policy Analysts and Planners (Bellavita and Blum, 1981) which is referenced in the Primary Readings at the end of the manual.

Once a problem analysis has been completed, the community and the clinic must determine what aspects of the problem they want to address. This may require collecting more in-depth information on various aspects of the problem, using methods of data collection described in Chapter 4. The priorities established by both the clinic and the community will then become the foundation for the clinic's modification of its health care program.

SETTING GOALS AND PROGRAM OBJECTIVES

The next stage of the planning cycle involves specifying the desired results of program modifications. These may be stated as goals and program objectives. Goals are general statements of the conditions which are considered most desirable for the community. A goal should relate directly to the problem being addressed and serve as a guide for setting program objectives. For example, if the problem being addressed is low birth-weight infants, the goal may be stated: To lower the number of low birth-weight infants. The more specific the clinic can be about setting its goals, the easier it will be to develop program objectives. However, this detail is not absolutely necessary since goals are only intended to provide a framework to begin the program modifications. Goals are statements about health status and the quality of life the community and the clinic agree they would like to see -- the dreams. They stand, regardless of whether the clinic's program is able to assist the community in achieving that status. Goals guide program activities, but program success cannot always be measured against them.

Program objectives are the statement of the results desired from the clinic's efforts or programs. They are measurable and are the base from which program success is determined. Another way of looking at program objectives is that they are the reason for the clinic expending any of its resources (Deniston, Rosenstock and Getting, 1968, p. 326).

Essential to the establishment of good program objectives is that they be measurable. This requires thought about how the program will be evaluated during the planning process as opposed to an afterthought once the program is in place. To facilitate measurement of program objectives, each objective should specify: who the intended result is for, what the result will be, how much of a change is expected, where it will occur, and when the desired change will come about. For purposes of COPC planning, the "where" question has usually been specified in the community definition. The clinic may wish to define "where" in the community the program will impact more narrowly. In such cases, this should be clearly stated in the program objectives.

An example of program objectives that could arise from the previous goal of reducing the number of low birth-weight infants is:

1) To reduce the number of births to women between the ages of 15 and 18 years in the community's public high schools by 10 percent in two years.

2) To increase the number of women who receive prenatal care before the third trimester of pregnancy by 5 percent in five years.

In most cases program objectives are still broadly stated in that there are intermediate objectives that must be attained before the program objective can be achieved. These are considered sub-objectives (Deniston, Rosenstock and Getting, 1968, pp. 325-26).

Intervention strategies or program activities are often confused with program objectives. For example, a clinic might state its objective as: to give flu injections to all community members aged 65 years or older in December. This stated objective actually describes a program activity. One method of distinguishing program strategies from program objectives is by asking the following question: "Does the action of the statement infer the utilization of time or other resources?" If the answer is "yes," the statement is a program activity. A program objective can be derived from an activity stated by answering the questions that follow: "Why would the clinic want to implement the stated strategy?" and "Why did the clinic develop the strategy?" Both questions provide answers that lead to the statement of program objectives or goals.

Using the flu injections example, the answer to the first question clearly defines the statement as a program intervention since the flu injection materials must be purchased and personnel must administer the injections. The clinic generated the following responses in answering the questions to reformulate their program objective.

- Community members 65 years and older are susceptible to influenza.
- Influenza season is in December.
- Many persons 65 years and older die from flu every year.
- Our community has many frail elderly.

These responses would have also surfaced if the clinic had conducted a thorough problem analysis prior to developing goals and program objectives. These statements can now be used to generate a true program objective with the addition of how much of the problem the clinic would like to impact. The program objective better stated would be: To reduce the number of complications and deaths of persons 65 years and older by 30 percent in the community during influenza season. Giving the injection is just one program activity that could accomplish the objective as stated.

The objectives of a program are often considered obvious and are taken for granted by clinic personnel and those they serve. In many cases, once the problem has been identified, clinics immediately begin developing program modifications because of feeling they know what needs to be done. This is

especially true when the needs identified have a clear medical solution. On the other hand when a non-medical intervention is the obvious solution, clinics sometimes give an equally sure response, that is, "there is no appropriate role for the clinic to play in this matter." It might take some extraordinary effort for the clinic to determine its role in this situation, but the standard response is very clear and certain. The critical first step of developing clear and measurable program objectives has been overlooked.

This oversight generally leads to development of less than optimal program interventions. In addition, neglect of this step can lead to: misinterpretation of the clinic's mission by those inside and outside of the organization; disputes over resources; and the inability of the organization to document its worth to those who support it, despite good work. This last point is often experienced by public health departments because their benefit to their community is not always obvious. Development of program objectives and selection of the appropriate objective, in relationship to the goals and problems identified through a COPC process, are essential before determining intervention strategies.

After program objectives have been defined, the clinic will need to create a plan for achieving these objectives. This involves identifying a range of intervention strategies, then selecting a strategy for implementation. These strategies should be linked to a program objective. In most cases, there will be multiple strategies which could achieve any one program objective.

INTERVENTION STRATEGIES

Intervention strategies, or program activities, may fall under one or more of the following categories:

- Medical, or treatment intervention
- Educational, including lectures, peer health education, workshops, films, mass media campaigns, etc.
- Political, including lobbying, demonstrations, letter writing campaigns, collaboration with associations and trade organizations with similar goals or interests, etc.
- Community organizing and mobilization, including organizing specific sub-groups of the community to create change, mobilizing the community to take action on its own behalf, etc.
- Organizational, including revising work roles or the working structure of the health organization, developing new units and implementing a team approach.
- Financial, including identifying alternative funding sources, designing cost-savings programs, etc.

The above categories are intended to stimulate creative thinking in identifying and developing intervention strategies and are not meant to be exclusive of alternative interventions that may be considered. Other ways of identifying interventions include thinking of: strategies which focus on changing individuals; institutional strategies which focus on changing laws, businesses or other organizations; and systems strategies which impact the community at many different levels. For example, a clinic goal is to reduce the number of lung cancer and severity of emphysema cases. The program objective is to reduce the cigarette consumption of teenage and young adult smokers by 30 percent in two years. Individually-oriented strategies may include stop-smoking classes and workshops, prescription alternatives to smoking, etc. Institutional strategies may including lobbying to increase the tax on cigarettes or organizing businesses to decrease the availability of cigarettes in the area. A systems strategy may include any combination of the two categories above, or it could include an approach which educates the general community on how cigarettes and cigarette advertising affect the community's youth by developing media campaigns designed to influence attitudes toward smoking.

Selecting an Intervention Strategy

An important consideration in the process of selecting an intervention strategy is to analyze the feasibility of each strategy. The clinic leadership (administration, medical director and board) will generally direct this process. The first step of this analysis is to determine how appropriate the strategy is to the cultural and political environment. Information that addresses this issue can be found in the problem analysis, as well as through the use of community involvement processes discussed in Chapter 6. In addition, the knowledge gained during the process of defining the community can provide valuable insights into strategies that are acceptable to the community. Strategies that might be socially or politically offensive to the community should not be considered.

Second, a summary of what resources are required for each alternative should be made. For this summary, the cost of the equipment, personnel (by type and number) and supplies, in addition to facilities and any other resources required to implement the intervention, are assessed. The clinic's resources are compared to each alternative. Included in the clinic's resources are any services, space, equipment, etc., which may be received in-kind; additional funding that might be secured with considerable certainty; and resources that could be made available through changes in the clinic's current practices.

The final factors to be considered in the selection process are:

- Is the timing of this alternative advantageous in terms of availability of funding or legislative activity?
- Is there support for the activity outside of the clinic that may be useful? For example, partnerships or sponsors.
- How much of the program objective can potentially be met by the strategy, given the effort and resources required?

Assistance in answering the last question can be obtained by looking at the results of other programs which may have initiated the strategy being considered. The alternatives chosen are those that are the most favorable in terms of appropriateness, resources, benefit, and potential contribution to resolution of the problem.

The feasibility analysis may reveal that a particular strategy is beyond the capability of the clinic, even though it is the best method of addressing the objective. As an alternative, the clinic may consider encouraging another organization to undertake the activity or bring the situation to the attention of political leaders. An example of this would be a case in which a clinic determines that one of the best strategies for addressing infant mortality and low birth-weight among a high-risk teen group would be starting a substance abuse rehabilitation program for pregnant teens in a clinic that currently provides only reproductive health services. Their analysis reveals that the resources required in establishing such services far exceeds what the clinic has available. The clinic staff knows, from its assessment of resources in the community, there is a special substance abuse rehabilitation program in the high school as well as a clinic nearby that has an active substance and mental health services program. Given the importance of this strategy to the objective, the clinic could decide to act as the catalyst to encourage one or both of those programs to address this issue.

Strategies must be fairly well developed in order to do a feasibility analysis. To implement the strategies chosen into the clinic's activities, formal implementation schedules should be derived, the resources further detailed and, most important, someone should be identified to take the responsibility for the intervention.

MONITORING THE IMPACT

One of the most important factors in evaluation has been previously discussed, that is, the development of clear and well defined program objectives. The discussion of evaluation for COPC purposes will be limited to evaluation of program effectiveness. Sophisticated evaluation methodologies are available such as randomized clinical trials, experimental designs, quasi-experimental designs and time-series analyses. Although these methodologies can be used for COPC, they are not usually the most appropriate tools, since it is expected that the medical interventions to be implemented are known to contribute to the desired outcome and are not of an experimental nature.

Evaluation for COPC will focus on monitoring how selected program modifications affect the objective and ultimately the community problem that has been identified. This is different from evaluating the process of implementing a strategy to ascertain if it is efficiently and properly operating on schedule. Evaluation of the process is important from an operational perspective and can influence the results of any program modification, but it usually does not provide information on attainment of the objective. Process issues can surface during effectiveness evaluation if a review of the factors that prevented the specified results is conducted.

Each level of the COPC staging criteria provides progressively more rigorous requirements for the monitoring or evaluation functions. This also means the time and cost of evaluation will increase progressively. It should always be kept in mind that the effort and resources used in evaluation should reflect the importance and proposed use of the evaluation (Blum, 1981, p. 298). In the discussion of the evaluative stages of COPC that follow, the definitions of the staging criteria have been taken from the recent Institute of Medicine Report on Community Oriented Primary Care (National Academy of Sciences, Institute of Medicine, 1984, pp. 40-44).

Stage I is the first stage in which the impact of an intervention on the entire community is observed through the subjective impressions of those at the clinic or in the community. Using one of the earlier examples for program objectives, lowering the number of births to teenage women, the clinic would seek the impressions of the clinic providers, the school principal, and perhaps the local hospital maternity ward personnel to decide if their program activities were successful. These persons might give responses such as: there are fewer pregnant teenagers in the clinic, the alternative classes for student parents are smaller, and there have been fewer teenagers in the hospital to deliver babies. Although this information tells the clinic little about birth statistics and provides no formal verification that their observations are true, this is not an unreasonable indicator of program success. These persons, due to their normal relationship to the problem, have considerable history and experience that might be surprisingly close to statistical information that would be collected at a more advanced stage of COPC.

Stage II extrapolates the data from large area data. Using the same example, the clinic could obtain birth data from the county on young mothers in the age group in question and cross-check this against the high school's absentee records due to pregnancy. This is an improvement over the subjective evaluation, but unless the information can be provided by ZIP Code or some other breakdown close to the population being addressed, the results of this comparison may not be accurate.

At Stage III a systematic evaluation of data specific to the community is used. The example program objective of increasing the number of women receiving prenatal care before the third trimester can be used to illustrate this stage. Simple before-and-after studies can provide adequate Stage III evaluation (National Academy of Sciences, Institute of Medicine, 1984, p. 41). The clinic may determine that the majority of those identified at risk deliver at one hospital. The clinic can then collect information from hospital records on deliveries to determine the number of patients who had prenatal care and compare this with the same information for a period after the clinic's implementation of a prenatal outreach program.

In the most advanced stage, Stage IV, the program is analyzed with the methods that are specific to program objectives and account for differential impact among risk groups as well as positive and negative impacts of the program. This can be accomplished with before-and-after studies, comparisons between similar groups in which only one may have the intervention, or the measurement of planned outcome versus actual outcome. All of these can provide both quantitative and qualitative information of the intervention and make use of

the well-developed denominator available once a clinic reaches Stage IV of COPC.

A good example of this is a comparative study that was planned by a clinic to evaluate the impact of a family life education program on teen pregnancy. The clinic had implemented the intervention in one of two high schools in its service area; the other high school had refused the program. The characteristics of the students in both schools were similar. A questionnaire was prepared to be administered to both groups of students inquiring about their knowledge, values and behavior. In addition, the clinic obtained from providers and the health department data on births and abortions for teenagers in the area to compare with the information collected in the questionnaires.

When selecting an evaluation strategy, it is important to note that all evaluation methods are subject to the problems of measurement and research design problems in terms of subjectivity, reliability and validity (Blum, 1981, pp. 270-299). The evaluation process in COPC is intended to provide feedback on the success of the health program's intervention efforts in addressing community problems.

Selecting appropriate measures or criteria for evaluation that relate to the problem being addressed is critical. It may not always be possible to use the secondary data that may be available from the local health department or elsewhere. This is especially true when the health problem being addressed requires a change in attitude or behavior. Suppose the clinic chooses to address the program objective of decreasing the number of young smokers through a smoking information program with teenagers. Changes in the lung cancer statistics due to this intervention would be difficult to evaluate, given the fact that the program's impact might not be seen for many years. Meanwhile the clinic doesn't know if its smoking information campaign is working and how it might be improved.

The criteria for measuring the effectiveness of such a program are not as easily quantified as in counting the number of students that attend sessions and may require more creative measures. Although a number is easily derived when counting attendance, no information on behaviors and attitudes that would help with program monitoring is obtained. Surveys of the school officials and students, as well as measurement of cigarette butts found in the school yard, sales of cigarettes at stores near the school, or even the subjective measures of smoke in lavatories or lunchrooms observed by teachers or hall monitors can be informative. Criteria for measurement are not always obvious or easy to identify; however, difficulty in developing criteria is not an excuse for not monitoring programs. If the problem is recognized and deemed important enough to be addressed, there is usually some reliable, objective, valid measure to determine if the program is doing what it set out to do.

Evaluation methods are integrated throughout the COPC process. Defining the community, identifying community health problems, and modifying the health care program all require evaluation tools. Monitoring of the clinic's programs, evaluation, marks the end of the planning cycle in addressing a particular community problem as well as the beginning of a continuous process of insuring

that a COPC practice is aware of its community and the requirements for improving the health of that community.

CHAPTER 6

INVOLVING THE COMMUNITY WITH COPC

This chapter highlights several key issues surrounding community involvement and COPC, and suggests several ways of involving the community with the health center practice. By assessing the resources and barriers to community involvement in each clinic and community, the reader will have a better understanding of how community involvement may be initiated or improved in a given situation.

BACKGROUND

Community involvement is central to the development of COPC in a health care practice. Some of the earliest health centers, such as those at Mound Bayou in Mississippi, Columbia Point in Boston, and Mile Square in Chicago, were founded on the principle that the local community should have significant participation in the operation of the health center. At that time, community health centers were organized not only to deliver medical care services, but also to become significant social and economic forces within their communities by offering job training and employment opportunities. During the 1970s, when federal responsibility for neighborhood health centers was transferred from the Office of Economic Opportunity to the Public Health Service, methods for retaining local control and community involvement in the centers were included in the health center legislation. To receive federal funding, community health centers are now required to have at least 51 percent of their board of directors be from the clinics' community.

The impact of community involvement on the clinic and the community and the obstacles and opportunities for effective community participation have been reviewed, analyzed, evaluated and debated for almost two decades. One of the by-products of these efforts is a tremendous collection of information, survey results, evaluation guides, training manuals, and a compilation of many innovative methods for involving the community in neighborhood health services.[1] At least one message has clearly emerged -- community involvement is an essential ingredient to the effective planning and delivery of community health services. This chapter highlights some of the findings of past years, and provides several practical methods for community involvement with COPC.

WHAT IS COMMUNITY INVOLVEMENT WITH COPC?

There are two components to the definition of community involvement, and each plays a vital role in the successful implementation of COPC. Community involvement is:

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[1]Health Systems Agencies (HSA) typically store much of this information. In areas where the HSA is no longer active, it may be worthwhile to track down where the information is stored and how it could be obtained.

1) the active participation of members of the clinic's defined community in the organizational structure and operation of that health center; and

2) the active participation of the staff of the health center in the community it serves.

Traditionally, methods to initiate community involvement in health care have focused only on the first component of this definition, involving community members in the health care practice. How community members are involved in health service delivery, including what roles they will fulfill, who they represent, how much authority they hold and even who exactly constitutes a member of the community, are all issues that community oriented primary care centers must address. Appendix C, Methods of Community Involvement, describes the steps involved in obtaining community participation.

Community involvement has many advantages. Community members often are better able to identify gaps and inadequacies of the current health system, including the identification of culturally defined health needs which may not be recognized by providers. Involving the community in the planning process provides a means of direct communication with providers that can help develop more realistic expectations and prevent misunderstandings about the intentions of health programs. In addition, individuals who are involved in the COPC process may gain valuable skills and experience that could be of personal benefit to them and their community.

It is the second component of the above definition which is increasingly playing a role in the effective implementation of COPC. Successful completion of each of the elements of COPC is highly dependent on a clinic's ability to develop cooperative, mutually beneficial relationships with community members, organizations, agencies and other health care providers. In essence, a COPC practice must become actively involved in the community it serves.

Community involvement in this manner can be an efficient and effective means for identifying and understanding community health issues. Spending time with community groups and organizations can help to build trust and form important linkages with community resources that can facilitate future program development. These relationships make it possible for health centers to pool information, staff expertise and other resources which could benefit all of the organizations involved. Of particular importance for the COPC practice is the relationship it forms with the local health department. Health departments and community health centers often serve the same communities and have overlapping goals. A cooperative and collaborative relationship between these two organizations can serve to increase the efficiency and effectiveness of both.

In order to realize the benefits of community involvement, a commitment is required among all of the members of the clinic staff. The clinic as a whole must be committed enough to allocate staff time to participate in community activities, form liaison relationships with other organizations, and to reach out to disenfranchised segments of the population. Whether these responsibilities are divided among several staff or lie primarily with one person,

time must be allocated for community involvement. Some clinics, although very few, have a community outreach worker that performs many of these activities.

PURPOSES OF COMMUNITY INVOLVEMENT

The purpose of community involvement is to build into the COPC planning process the perceptions, values, and priorities of the clinic's service community. Health providers are familiar with programs that are theoretically well conceived, yet fail due to a lack of consideration of the norms and values of the population for which they are planned.

This is illustrated by a group of physicians who attempted to develop a community-based hypertension program. The data they found for this particular community revealed an exceptionally high rate of hypertension. When the physicians tried to enlist members of the community to participate in the program, they refused to cooperate and actively resisted the development of the program. These physicians soon found out that the community felt that its most important need was having emergency services. They were not willing to help develop other health programs until this need was met. It was only after the physicians addressed the need identified by the community that they were able to raise its awareness about the hypertension problem and gain the community's cooperation and support for developing a hypertension program.

This illustration highlights the importance of COPC clinic staff becoming actively involved in their community. The physicians in this example were not able to involve the community in their program until they addressed the community's identified need. Involving community members in the planning and delivery of a clinic's program can not only build a strong base of support for COPC activities, it can also increase awareness about specific health issues and programs. Although community involvement will not guarantee program success, it can increase program effectiveness by bridging the gap between the intentions of providers and the needs of the community.

TYPES OF COMMUNITY INVOLVEMENT FOR COPC

Community involvement often includes political activities which support both the clinic and the community. This may involve community members lobbying for legislation which supports the health center, such as for increased financial support, or even engaging in fund raising drives to develop or expand health programs. In communities that include disenfranchised populations, with few or no representative organizations, the health center can play a vital role by facilitating the development of community leadership and acting as a catalyst for individuals and agencies to organize and mobilize for improvement of community health. Clinic staff can use their influence and expertise to advocate for the community around specific health issues, such as instituting workplace smoking legislation, or banning toxic dumping in areas known to be hazardous to residents. All of these actions constitute a form of direct community involvement.

Individuals working with the community, such as social service workers, other health professionals, or service providers, provide an indirect form of community involvement. These individuals are important contacts because of their familiarity with the community, ability to provide specialized information or their influence within the community. These individuals or agencies can often help to gain access to the community.

For example, the South of Market Health Center in San Francisco, with the assistance of a grant, decided to conduct a community health needs assessment by surveying a sample of high risk, clinic non-users in the community, primarily the homeless and the elderly. Due to the unique problems involved in reaching these groups, the clinic chose to contact all of the health and social service agencies, including churches, free meal sites, and shelters for the homeless that served this population. Through contact with these agencies, the clinic was able to find over 16 representatives of the homeless and elderly population, and from the perspective of these support services, to identify the greatest health problems among this group. The 16 community representatives later proved to be instrumental in the process of identifying and prioritizing community health problems.

COMMUNITY ROLES IN COPC

When community members become involved in a clinic practice, the effectiveness of their participation will depend, in part, on the roles developed for them to fulfill. The nature of these roles will vary with each program, based on the goal and stage of the COPC process, and the level of involvement considered acceptable to both the clinic and the community. These roles range from decision making and advisory activities to organized political response to legislators.

Decision making Activities

Decision making activities include having community members on the Board of Directors or on committees which make decisions regarding the development of COPC. In some cases, the community may develop and administer a part of the program, such as a community education or outreach program.

Most community health centers are familiar with having community members on their Board of Directors as a method of community involvement. Unfortunately, the value of this type of participation has often been met with skepticism, if not denounced, by health care professionals. The issue usually revolves around the roles in which community members are placed (Blum, 1981). Often decision making roles are defined without considering the knowledge and expertise of the community. While many communities have members with professional expertise (lawyers, administrators of other programs, etc.) the knowledge of those who are not health professionals all too often goes unrecognized. As health care consumers, community members can bring to the decision making body an expertise in something very important to the development of health care services, that is consuming health care. Only they have the expertise in the difficulties of using health care services. Addressing these difficulties is, in part, what

improving the medical care program is all about (National Council on Health Planning and Development, 1981, p. 369).

It is particularly important that the roles which community members are asked to fulfill be appropriate for their level of expertise and the resources available to them. The most common expectation of community participants is that for them to represent the opinions, values, and priorities of the broader community. What is seldom recognized is that an individual cannot "represent" a community without having ties to a community group or local organization. Unless they are extremely sensitive to community needs, the opinions and ideas they express may be of limited value.

When community members are part of a decision making group, the proportion of providers to community members will need to be considered to assure that the opinions of the community are not continually outweighed. As a result, the decision making process is likely to take longer as there usually will be a broader range of factors to consider.

Advisory Activities

The distinguishing characteristic of advisory activities when compared to decision making is that community members are not directly involved in the formal organizational structure, or decision process of the clinic. However, they do have influence on the program development process through recommendations given to the clinic. Again, clearly defining roles for community members and the clinic's expectations for the advisory group is important before recruiting individuals to give advice for the program.

For example, a suburban community health clinic recruited an advisory committee to identify and address the health care needs of the elderly in the clinic's defined community. The specific objectives for this committee were: (1) to review the clinic's current geriatric programs to determine the appropriateness of services; (2) to identify potential sources of funding; (3) to determine future directions and goals for the clinic's geriatric services; and (4) to develop specific recommendations on how to structure and present programs in a way which is acceptable to the elderly population. To accomplish these objectives, the clinic recruited a committee which included primarily seniors from the community, one city council member, and two social service providers who worked with the elderly in the area. This committee has been meeting on a monthly basis for over three years and continues to make valuable recommendations to the clinic's program. Note that the participants on this advisory committee were all selected to fulfill certain roles: the elders to provide insights to the values, norms and preferences of their peers; social service providers who were knowledgeable of the health and social service system; and an elected community representative who had knowledge of local and regional funding resources.

While involving community members in advisory groups has the advantage of being able to target sub-groups of the community to address specific issues, how information generated by these groups is transferred to the decision makers of the clinic must be carefully thought out. Valuable information is frequently

"lost in the translation" or misinterpreted when it is transferred from one group to another before it is used.

A final consideration is the clinic's responsibility to the advisory group. If a clinic expects an advisory group to continue providing recommendations for its programs, the clinic must be accessible to them and be willing to consider the recommendations provided.

Information Activities

This type of involvement is more of a one-way communication process, with community members participating mainly by answering specific questions generated by the clinic. Typically, community members are involved on a short-term or one-time-only basis. Examples of this type of community involvement include community participation in a survey; interviews with key individuals or leaders from the community; or the conduct of focus group meetings with a sample of the targeted population to obtain their reactions or opinions on a specific issue or program.

Among the advantages of this type of involvement are that the community needs little or no preparation to participate, sub-groups of the population can be easily targeted and very specific information may be obtained. On the other hand, the information obtained at this level will be limited by the questions which the clinic chooses to ask. Valuable information which could affect how a program is delivered can easily be missed if the clinic does not ask the "right" questions. Involving the community in gathering information requires careful planning by the health clinic to design questions which are appropriate as well as to design appropriate ways for asking them.

An additional consideration for involving the community on this level is that the information will often be gathered from several (or many) individuals and will need to be compiled in a meaningful way before it can be used by decision makers. As with advisory activities, care must be taken that the information is interpreted and transferred accurately and in a timely manner to those who can use it in the clinic. These activities can be good for determining the level of interest for a program, or what the community's current perceptions about some issues are.

Effective Community Participation in the Primary Readings for this chapter, listed at the end of the manual, outlines in a brief, concise format the guidelines that should be considered when involving community members. Before involving community members on any level, the value of participation to the community must be firmly established.

BARRIERS TO EFFECTIVE PARTICIPATION

Perhaps the greatest obstacle primary care centers face in becoming involved with their communities is the lack of adequate staff time. Most health centers do not have sufficient staff to develop effective relationships with other community organizations, agencies and providers.

The two greatest barriers that community members face which prevent effective participation in health care organizations are:

(1) A relative lack of knowledge of health systems and the professional terminology which may be difficult for the non-medical person to understand; and

(2) the lack of an organizational base of support for community representatives.

Other problems include (not in order of importance) a general lack of training of both consumers and providers for their role as policy or decision makers; underrepresentation of the community; absenteeism and inadequate selection procedures for community representatives. In addition, the control of information by medical professionals and their tendency to lead groups into focusing on treatment interventions rather than on prevention activities, have created barriers to effective community participation. If a clinic is committed to involving the community in the development of COPC, in particular placing non-health professionals in a planning or policy making role, then the barriers listed above must be carefully considered and addressed.

CONSIDERATIONS FOR COMMUNITY INVOLVEMENT: AN ASSESSMENT

Before determining how to involve the community in the clinic's program, it will be helpful to assess both the resources and barriers to community involvement as they apply to a particular community and clinic. In order to identify the wide array of resources and barriers which apply to each clinic, it may be helpful to divide them into three categories: the community, the clinic, and other considerations.

By exploring each of these areas, the clinic will be able to identify resources that will facilitate community involvement, as well as barriers which may prevent effective participation of the community. The results of assessing these variables will provide each clinic with the information necessary to develop one (or more) appropriate ways of involving the community in the COPC program.

Assessing the Community

The purpose of this assessment is to find out how the community is organized, what parts of the population are represented by formal organizations, and what resources are available that may facilitate the development of COPC, such as agencies or individuals who are knowledgeable about particular segments of the community. This involves identifying community organizations, health and social service agencies or individuals, or volunteer organizations which serve all or portions of the community which also are served by the clinic.

Community organizations are groups which represent some part of the community and meet on a formal or informal basis, and whose membership includes individuals in the community. Examples of community organizations include groups

such as senior organizations farm workers associations, church groups, parent teacher associations, neighborhood associations, consumer advocacy or political groups, etc.

Health and social service agencies in the community may not represent precisely the same population as the clinic; they are knowledgeable about those groups which they serve and may be able to assist in gaining direct access to groups which are otherwise difficult to reach.

Volunteer organizations, such as the American Cancer Society, the American Lung Association, or more localized groups such as Northern California's HICAP (Health Insurance Counseling Advocacy Program), can provide valuable services to both the clinic and the community at relatively low or no cost. For example, local chapters of the American Cancer Society often train speakers, and keep a current list of speakers who may address a variety of cancer-related topics for the clinic or community.

When the organizations and agencies operating in the defined community have been identified, they may be compared to the community definition and characterization discussed in Chapter 3 in order to determine which groups are formally represented and have health services available to them and which groups do not.

Assessing the Clinic

There are two purposes for assessing any clinic before involving the community in COPC:

1. To identify resources within the clinic that will facilitate the involvement of the community; and

2. To identify barriers within the clinic that may prevent or detract from effective community involvement.

Identifying resources within a clinic involves finding out how much time, money and other resources are needed to facilitate community involvement with the clinic. It will also require identifying who on the staff has both the interest and skills necessary to develop and maintain relationships with community organizations and agencies. Sometimes community members are hired and trained to take on staff roles in the clinic, and it is "forgotten" that they are still community members. These individuals hold a unique perspective of understanding the clinic and its functions, as well as understanding the norms, values, and priorities of the community. They could be a valuable resource for the clinic, and they may be able to contribute needed information for the development of COPC.

Identifying barriers to effective community involvement within a clinic may be more difficult than finding resources. No amount of community involvement can be effective unless clinic personnel are both receptive and responsive to the input community members have to offer. For this reason, it is important to assess the attitudes of clinic staff toward community involvement: Does anyone

feel that meeting with community groups or nonprofessionals is "a waste of time?" Are providers aware of and responsive to cultural differences within the communities they serve? The cross-cultural needs assessment questionnaire, included in the reader may be adapted to assist in identification of cultural barriers among clinic staff. Negative attitudes toward community involvement are not uncommon; however, these must be identified and addressed before closer ties with the community can be made.

Other barriers that may need to be addressed to facilitate effective involvement of the community include: organizational barriers (the clinic does not operate in a way which is conducive to receiving "outside" input); financial barriers (there is no money or staff time available to develop community relationships); or other factors (such as historical or political situations may present barriers to community participation). These factors are generally unique to each clinic.

COMMUNITY INVOLVEMENT: THE PROCESS

The process of involving the community can be viewed as consisting of six phases. These phases and their purposes are:

Phase 1. Provider preparation - to facilitate clinic providers to be receptive and responsive to community input and participation;

Phase 2. Outreach and recruitment - to identify and select appropriate representatives of the community to participate in the COPC program;

Phase 3. Preparation of community members - to increase community member's ability to participate effectively in the COPC program;

Phase 4. Obtaining information - to obtain information from individuals and groups that will contribute to developing community-oriented health services;

Phase 5. Using information - to incorporate information obtained from the community into the program planning and implementation process;

Phase 6. Followup - to report back to the community on how its input was used, what impact it had on the health care program, and to obtain community reactions when possible;

Methods for achieving the goals for each of these phases will vary, depending on the level of community involvement desired and other circumstances of the clinic and community. A detailed discussion on each of these phases, their purpose and goals, as well as methods for carrying them out, are included in Appendix C - "Methods of Community Involvement." The methods listed in this appendix are designed to offer suggestions for how each goal can be reached. They are not meant to be exclusive of other methods, or in any way imply that other methods are less desirable. Each clinic will need to select methods which will be most effective in their particular situation.

Each clinic should also consider the potential negative impact or unintended results of involving the community. For example, the South-of-Market Health Center in San Francisco had obtained funding to hire seniors and homeless persons to assist them in doing outreach and interviewing in the community. Although the clinic had no trouble recruiting seniors and homeless persons for the job, many were reluctant to be hired because it would jeopardize their eligibility for welfare and housing assistance.

Once the resources and barriers for community involvement have been identified, the clinic will be able to begin developing roles for community participants. Designing these roles requires balancing the needs of the COPC program with the resources available in the community. Ideally, the roles developed will have enough flexibility to accommodate the special skills, interests or needs of the individuals recruited to fulfill them.

Henrik Blum in Planning for Health offers some practical advice on this process: "It is my belief that we should design relationship situations in terms of how people generally seem to behave rather than how we would like to believe they could behave under ideal circumstances." (Blum, 1981, pp. 370-390).

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ADDITIONAL RESOURCE MATERIALS

CHAPTER 4 - IDENTIFYING THE HEALTH CARE NEEDS OF THE COMMUNITY

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Centers for Disease Control, Center for Health Promotion and Education (1985). Problem Identification Manual (Draft). In Planned Approach to Community Health. Atlanta, Georgia: Centers for Disease Control.

The Community Data Manual describes the steps involved in collecting data from the community, and lists community, state and federal agencies that can provide data and support. The Problem Identification Manual covers how to interpret different types of data, and how to present information effectively to individuals and groups. Available from Centers for Disease Control, Center for Health Promotion and Education, Division of Health Education, Atlanta, Georgia 30333.

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U.S. Dept. of Health and Human Services, Public Health Service, National Institutes of Health, National Cancer Institute (1984). Pretesting in Health Communications: Methods, Examples, and Resources for Improving Health Messages and Materials. NIH Publication No. 84-1493, January.

This manual describes methods for developing and pretesting health messages for public distribution, including how to conduct focus group interviews. Available from the National Institutes of Health, National Cancer Institute, Bethesda, Maryland 20205.

CHAPTER 5 - MODIFYING AND MONITORING THE HEALTH CARE PROGRAM

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In this pamphlet the author discusses the basic principles of proposal writing, including the primary steps of the program planning process. This information may be obtained from: The Grantsmanship Center, 1031 S. Grand Avenue, Los Angeles, CA 90015, or telephone (213) 749-4721.

APPENDIX A

SITE APPLICATIONS

The following exercises are designed to be used with the material presented in each chapter of the manual. By working through these exercises, the reader will be able to determine the stage at which his or her clinic currently practices COPC. This process will provide the reader with the information necessary to begin systematic planning to achieve a higher level of COPC delivery.

CHAPTER 1 - THE DEVELOPMENT OF PRIMARY CARE AND COPC

1. Define the elements of primary care you provide now.

(NOTE: The following questions cover the five basic elements which define good primary care. Answer the questions below using the sub-questions to stimulate your thinking about the services provided by your clinic.)

Are your services accessible to all members of your community?

- Is there adequate transportation?
- Are services affordable?
- Are you open or do you provide telephone coverage 24 hours/day, 7 days/week?
- Are providers culturally sensitive to the community?

Are services comprehensive?

- Do you provide referrals for specialty care or hospital admission?
- How do you follow up on referrals?
- Do you provide preventive services as well as episodic care?
- Do you provide non-medical supportive services, i.e., counseling, outreach, nutrition?

How well are your services coordinated?

- Do you have a method of coordinating patient services?
- Do you have regular team meetings in which patients are discussed with all members of the health care team?

Do you provide continuous care?

- What type of follow-up on individual patients does your clinic provide?
- Are patients discharged from hospital with follow-up appointments to your clinic?
- Do specialists refer patients back to their primary care provider after consultation?

2. Does your clinic serve a clearly defined community?

3. Are community members involved in your program? If yes, how? Are they representative of the community you serve?

4. Do you assess community health needs periodically? What are some of the health needs you have identified in the past five years?

5. Have you developed health programs to address these health needs?

6. Do you evaluate your programs and services?

7. Did you change any of your programs or services after evaluations?

CHAPTER 3 - DEFINING AND CHARACTERIZING THE COMMUNITY

1. What population(s) does your clinic currently serve? Define the population that your clinic is now serving.
How many patients did your clinic see during the past year?
What is the distribution of these patients by:

   age
   sex
   ethnic group
   income level
   location of residence
   language spoken

   (NOTE: Much of this information may be available from your clinic's last need/demand assessment. If not, the information may be readily available if your clinic has a computerized billing system. Otherwise consider a brief review of the random sample of charts or obtain estimates from different members of the clinic staff.)

2. What community would your clinic most like to serve? Discuss this with clinic administrators, providers, board members, patients, and other prominent members of your community. If possible, bring people from each of these categories together in a meeting to discuss this.

3. Of the groups that your clinic would like to serve but who are not currently using the clinic, realistically which group might be expected to increase their use of your clinic?

   - What barriers exist for these groups to use the clinic's services?
   - What resources would be necessary to overcome these barriers?

4. Briefly define the community your clinic is able to assume responsibility for, using both the characteristics of the population and geographic boundaries; i.e.,

   age
   sex
   ethnic groups
   languages spoken
   income
   location of residence

   If you are using census data or a database which includes people beyond your defined community, which subgroup or combination of subgroups would best correspond to the population that your clinic has defined as its community?

   Identifying the sources of information which most accurately will reflect your community may require some technical assistance. (Appendix D of the Federal 330 Need/Demand Assessment Guide provides a listing of agencies that may be able to provide this.)

CHAPTER 4 - IDENTIFYING THE HEALTH CARE NEEDS OF THE COMMUNITY

Appropriate involvement of the community may be useful to the completion of the site applications below. (See Chapter 6.)

1. Has the clinic taken steps to identify the health problems in your community? If so, what?

2. What methods could potentially be useful to the clinic in the identification of health problems in the community?

3. What resources are available to the clinic which may help in the problem-identification process? For example:

   - databases that are specific to the community,
   - community groups that may be easily contacted,
   - educational institutions nearby that may provide technical or student assistance.

4. What are the prevalent health problems that have already been identified among the various age, sex, economic, and ethnic groups seen in the clinic? In the community at large?

CHAPTER 5 - MODIFYING AND MONITORING THE HEALTH CARE PROGRAM

1. Using the health problem the clinic has chosen to address (as derived through the process described in Chapter 4), identify:

   a) What are the precursors, or factors, which contribute to this problem in your community?

   b) What are the consequences, or results, of this problem?

2. Once a thorough understanding of the problem is developed, select the aspects of it the clinic would like to address. Develop program goals and objectives (as defined in Chapter 5) for the problem.

3. Develop a list of intervention strategies which potentially could be used to meet program objectives. Of these strategies,

   a) Analyze the alternatives as described in Chapter 5.

   b) Determine which of the strategies is feasible for the clinic to implement.

   c) Identify other institutions or persons who may be able to develop and carry out similar interventions for those strategies for which the clinic does not have the resources for implementation.

4. How are program results to be monitored?

   a) What are the measurement criteria for success of the intervention?

   b) When will evaluation occur?

   c) Who will conduct the evaluation?

   d) Who will be responsible for responding to the results of the evaluation activity?

CHAPTER 6 - INVOLVING THE COMMUNITY WITH COPC

A. Assessing Resources and Barriers in the Community

Review your goals for COPC. With these in mind, what are the resources in the community that may facilitate community involvement?

1. Make a list of the community groups that exist in your area. Try to find a contact person and telephone number for each group and describe briefly what part of the community it represents.

2. Make a list of all social and health service agencies that work with your community. Again, for each agency, try to obtain a contact name and phone number. What parts of the community would each agency serve and be knowledgeable about?

3. List any other organizations or individuals that could be a resource for the development of COPC in your community.

4. Compare these lists with your community definition. What segments of the community have a representative organization or are served by health or social service agencies? Do any of these agencies or organizations serve the same groups? If so, it may be beneficial for both the clinic and the organizations to meet together to discuss the issues involved in serving the same groups.

B. Assessing Resources and Barriers Within the Clinic.

1. What is the clinic's current relationship to its community? Do providers attend community meetings or participate in community functions? Are any staff members part of the clinic's defined community?

2. Many clinics already involve community members in various capacities. Review all of the different functions in which community members are involved for your clinic. Has community involvement had an impact? Has it been positive or negative? If there has not been a positive impact, evaluate the role in which community members have been placed. Are the expectations for their roles appropriate? Are they clear?

3. What are the attitudes or feelings among your staff about involving the community in planning health services? Do they feel it is important?

4. Are staff members aware of and responsive to cultural differences among community groups served by the clinic? Do staff members have difficulties in providing services to any cultural or economic sub-group of the community?

5. Is anyone on your staff interested in developing community contacts or involvement?

6. Are there community members on the staff of your clinic? Could these individuals provide assistance in the development of COPC?

7. Who on your staff has skills or experience in: teaching, training, organizing, facilitating groups, interpersonal communication, and cross-cultural training? What other skills or experience do members of your staff have that may facilitate community participation (i.e., political activism, public speaking, writing, etc.)? Would individuals with these skills

be willing to apply them to developing community relationships for COPC?

APPENDIX B

FUNDAMENTAL ASPECTS OF INFORMATION SYSTEMS FOR COPC

INTRODUCTION

Printed information systems have been around since the earliest libraries. The management techniques for those systems are analogous to techniques used today. The major difference between ancient and modern information systems is in the media on which the data are stored. Information management problems, many of which are addressed within this COPC manual, are timeless. They include:

- Deciding what kind of data to store
- Obtaining the data
- Validating the data before input
- Standardizing the data to some common form
- Organizing the data for ease of uses
- Displaying information in meaningful ways
- Using information to anticipate future events

Information systems can mean different things to different people, depending upon their orientation. To a clinic director, an information system is a computer that can collect, store, retrieve, and process information that is used or desired to help in the planning and control of the long-range and day-to-day operations of the facility. For a clinic's nurse, an information system is the terminal in which patient information is typed and weekly schedules are printed out. The common element in both of these scenarios is a series of computer-based processes that manage information. An information system can aid the health care facility in its strategic decision making and analyze the characteristics and trends of the community it serves.

The purpose of this appendix is to introduce the practical aspects of two types of information systems: database systems and expert systems. In the discussion of the features and functions of information systems management, readers are encouraged to reassess the ability of their information systems to supply the kinds of data necessary for strategic health care planning.

DATABASE SYSTEMS

A database system is a series of processes which enables its users to:

- define and organize information according to the user's needs; and
- create, modify, delete, arrange and retrieve information held in the database and display it in a manner that is useful and meaningful for answering specific questions.

Some tasks, because of their size, complexity or highly repetitive nature, are more practical when performed on a high-speed computer. Clinics often need to trace an individual patient's record over time, or perform a series of calculations based on all patient activity for the current year. If this information is computerized, a simple program command would allow the scanning of, say,

1000 records in a matter of seconds. The time and effort expended are insignificant when compared to a manual search through mountains of filing cabinets and valleys of folders.

Although all database systems contain the same basic functional qualities, simplicity and the skills required to run the system, commonly referred to as "user-friendliness," are what distinguish one program from another. Decision makers can now engage many database systems to extract any type of information without the aid of computer programmers.

Database Terminology

The elements of a patient information file provide a good environment to understand some of the basic terminology used when discussing computerized database systems.

The individual data elements -- name, address, diagnosis -- form distinct columns, or FIELDS (see Figure B-1). Each field can hold a specific class of information: letters or characters, numbers, calendar dates, a logic response (True/False, Yes/No), and others. The field has a length that is determined by the user during the design phase of any database system. Although individual systems may differ, most commercial systems will allow for more than one hundred fields per database.

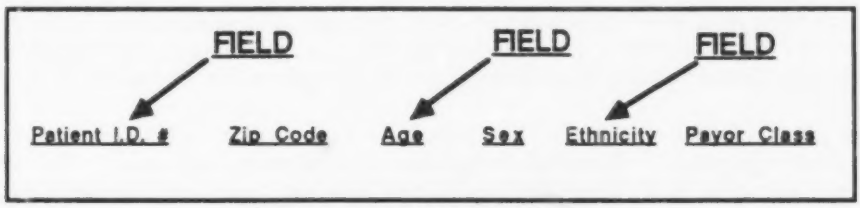

FIGURE B-1: DATABASE FIELDS

A RECORD is simply a collection of fields that make up a single entry into the database (see Figure B-2). This might be a particular patient's individual information on a clinic's or hospital's registration form.

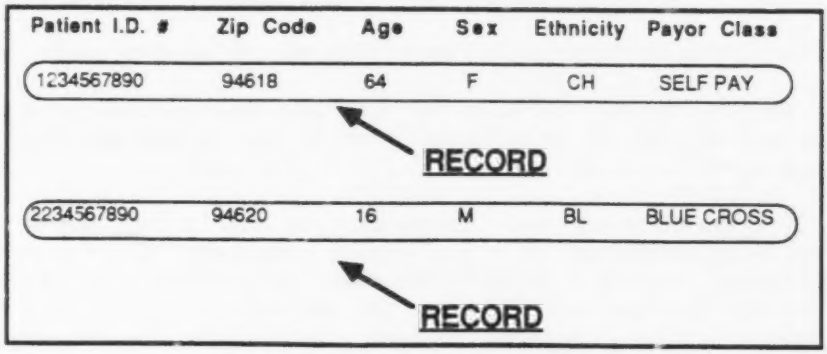

FIGURE B-2: DATABASE RECORD

The database FILE is the aggregate collection of all similar records into a single, larger unit (see Figure B-3). Figure B-4 is an example of a report produced by sorting the patient information file by the ZIP Code field. Files can be of any length, from one record to the theoretical boundary of one billion records available with some commercial systems. Files are stored on an electromagnetic medium like a floppy disk or the computer's hard disk. A backup copy of the database file(s), either on floppy disks or magnetic tape, is always made to insure that the data are not lost should the system fail or "crash."

PATIENT DEMOGRAPHIC FILE

Patient I.D. #	Zip Code	Age	Sex	Ethnicity	Payer Class
1234567890	94618	64	F	CH	SELF PAY
2234567890	94620	16	M	BL	BLUE CROSS
3334567890	94618	23	F	AS	MEDICAL
4444567890	94618	45	M	WH	KAISER
5555567890	94620	44	M	CH	SELF PAY
6666667890	94618	65	F	AS	MEDICARE
7777777890	94618	04	F	BL	SELF PAY

FIGURE B-3: DATABASE FILE

PATIENT DEMOGRAPHIC FILE:

BY ZIP CODE

Patient I.D. #	Zip Code	Age	Sex	Ethnicity	Payer Class
1234567890	94618	64	F	CH	SELF PAY
3334567890	94618	23	F	AS	MEDICAL
4444567890	94618	45	M	WH	KAISER
6666667890	94618	65	F	AS	MEDICARE
7777777890	94618	04	F	BL	SELF PAY
2234567890	94620	16	M	BL	BLUE CROSS
5555567890	94620	44	M	CH	SELF PAY

FIGURE B-4: DATABASE FILE SORTED BY ZIP CODE

Organizing Data

If a clinic's patient information is automated, decision makers can make use of a computer's capacity to manipulate or "work" the data. For example, one clinic might require an alphabetized listing of patients, or a composite count of all employees with less than the required continuing education units.

best copy available

Computerized database systems all share the ability to re-sequence, SORT or INDEX, the file from its original order to an arrangement that fits a specific situation. This process reworks the entire array of data elements that makes up the file into a focused list by "shuffling the deck" of records along one primary characteristic.

Another powerful component of a database system is the software's ability to scan an entire file and flag specific cases which meet a given criterion. This process is called a "QUERY" and is one of the most valuable features for information systems users. For example, a clinic director wishes to know how many patients from one ZIP Code have been treated for trauma related injuries in the last six months. If the database system is flexible, the user can initiate the query procedure for all cases that have the ZIP Code, diagnosis and time frame of interest. The query function can sift through any nonessential data and supply the decision makers with the appropriate type and level of information needed to answer a question brought to light by the simple reorganization of the data file.

Report Generation

Another essential characteristic of any database system is the ability to display information from a database file. A computerized database system must possess a method to move information from the memory of the computer to a hard copy, the printed page or report.

The flexibility of any database system's report writing capabilities is often the benchmark for buying a particular system. Because a decision maker's time is limited, reports must have a clear and easy to interpret design. Reports that are overly detailed and confusing are seldom given the same consideration as those that are concise. Some systems will print either individual data elements or a summary of elements in a columnar arrangement. More advanced systems allow for freedom in overall report design to accommodate the various types and purposes of reports used for health center planning and administration.

Relational Database Systems

Many database systems will allow users to combine information from separate files. A relational database system is one which can activate and link distinct files through a common data element. For example, a clinic might be interested in analyzing epidemiological trends in their clinic's primary service area. Relational database systems allow the users to combine elements of a demographic information database with a file containing utilization information. Since both files would conceivably contain the patient's identification number, the system can juxtapose any and all data elements from the two files for display on a monitor or a printed report. Patient names or other confidential information can be suppressed in the system to maintain anonymity and security.

A relational database system can be one of the most efficient and practical methods for collecting and analyzing an organization's information. By working with a larger quantity of smaller files or fewer data elements, rather than one or two colossal files, such a system allows for greater flexibility in the kinds of combinations of data which can be compared and analyzed. It also saves considerable space in the storage of files by eliminating the inherent redundancies of reporting every aspect of a patient's health care experience in each file. Many relational database systems can coordinate ten or more files at once, which can give the user an almost infinite number of combinations to choose from.

Database Systems Administration

Database systems management can be viewed as the system design, input and analysis. Database administration involves managing the personnel aspects of the system. As with any new equipment or process, the expectations of the equipment's performance often precludes any real commitment on the part of the organization to its day-to-day maintenance. The best database system available, one which has significant investments in its design and functioning, will quickly become dated and inefficient without a commitment to maintain the system on an ongoing basis. The steps in which the organization must commit to maintain the system's integrity include:

1. Database Planning: The most important aspect of planning is the projection of data requirements for future applications development and how that data should be integrated into the existing field structures, software, or hardware components. This is best determined by assessing the information needs of all levels of clinic staff and operations.

2. Database Standards: Setting standards regarding file construction (field names, file names, etc.) will ensure the system's future flexibility and can reduce the effort required to merge data from complementary files. This development of a common structure from one file to the next decreases errors and increases overall performance.

3. Adequate Systems Staffing: This measure will guarantee that the database system remains functional and responsive to the changing informational needs of management and the technological confines of the system's hardware and software. Since the external environment is dynamic, the system must respond accordingly. A knowledgeable systems person can quickly become a key player in the process of day-to-day decision making for a health care center.

4. Training: This is a critical element of database system administration that can never be overemphasized. Often a system is never fully utilized because the users or decision makers are not aware of its full potential. Depending upon the size and budget of the clinic and the

system, training sessions can range from informal readings of the software's manual to the more rigorous workshops held by a systems manufacturer.

5. Security: All database systems have a security feature which can restrict access to any or all portions of specific files. Depending upon the nature and volume of the file, different levels of security can be established to safeguard data from inappropriate access and/or potential damage.

6. Documentation: All application programs and files should be documented. As the database system grows it becomes more complex, and this process protects the organization from the untimely departure of key personnel (users and decision makers) and guarantees continuity of the system. Documentation can take on many forms: users manuals, codes for naming files or database fields, tables of related files, etc.

The Costs of a Database System

The cost of database system software is usually determined by the number of features and functions it contains and its degree of programming sophistication. Commercial software packages designed to run on an IBM PC or compatible computer can range from $100 to $3000 depending upon the factors mentioned above. Most facilities can purchase a software program for under $1000 with the confidence that it will handle most of their database information management needs for many years. As mentioned earlier, there is a wide variety of "user friendliness" from one system to another. Many organizations can recognize substantial savings by adopting a system that does not require hiring a computer programmer to run a database that might otherwise be operated by retraining a staff member.

Computer hardware (the machine itself) costs are relatively small. Occasionally, clinics have personal computers (PC's) which are not fully utilized. If the need to buy a PC arises, dependable machines are available for under $2500.

EXPERT SYSTEMS

What is an Expert System?

In most health care organizations there is a significant number of repetitive decisions. Despite their repetitious nature, the importance of these decisions requires considerable time of senior staff. An expert system is a computer program developed to improve the efficiency and effectiveness of the decision making process. Specifically, expert systems provide advice as to what could or should be done in a given circumstance. These systems perform at a level of competence equal to that of a skilled staff member even though they can be operated by persons with little or no knowledge about the subject of the

decision. It is important to note that although this discussion is regarding computer systems, these systems are not limited to just numerical computations. Expert systems can also reason on the basis of qualitative facts.

The quality of an expert system can be measured by the accuracy of the recommendations and the extent to which it provides the following features:

- It can communicate with the user in a language that is very much like everyday English, which can make it particularly useful in developing health education programs or providing information or community resources to the clinic's service population.

- It can develop general conclusions from specific facts. For instance, it could determine eligibility for Medicaid, special health programs or social services on the basis of data concerning a person's income, family status, etc.

- It can expand easily to include new information.

- It can provide recommendations that include the degree of confidence that should be attached to each one, thus assisting the user in making decisions.

- It can show the logic that led to a recommendation, which makes the system excellent for education and training.

Expert Systems Development

Expert systems can now be developed using microcomputer software that is no more complicated than the software for database packages. A system can be created in three ways First, it can be done by the "expert" decision maker working directly with the software. Second, a non-expert can use the software to develop the decision rules after reviewing policy and procedure documents and/or interviewing the experts. The third option, available with some, but not all, software packages, is to take the data and results from previous decisions and induce the rules that led to those decisions. These "historical" rules then become the basis for future decisions.

A common approach to developing an expert system, since they are easy to modify, is the use of prototype systems. In other words, the first system used may be one which does not include all of the desired considerations or features. In fact, start-up of a system with out knowing all of the features the organization may want to use is not unusual. The software includes a "run-time" feature which allows anyone to use the system, but only the developer to make changes. This assures the integrity of the decision making process. Experience with the prototype will show what changes or additions would be advantageous. These modifications are easily incorporated into an improved version of the system.

Benefits of Using an Expert System

The fact that an expert system incorporates the best available knowledge for making a particular decision in a computer program leads to several important benefits. First, use of the system will provide consistent decisions even if it is used by many different people. Second, these decisions can be made by persons who are less skilled than the expert whose knowledge the system is based upon. Third, this knowledge will remain with the organization even if the expert leaves.

Two additional benefits of expert systems are that the system can "explain" how a decision was reached and provide a written record of this logic for each decision.

The Costs of an Expert System

The major cost of using expert systems is the purchase of the software package, sometimes called a "shell." Prices for these range from a few hundred to several thousand dollars. The application discussed in the example below was developed with a fairly sophisticated, yet user-friendly, system costing about $750. This price includes both the development system and the run-time system which allows an unlimited number of copies of a developed system to be used throughout the organization at no additional cost. For most organizations the hardware cost will be negligible. There are quite good systems that run on personal computers such as the IBM PC. The only personnel costs are the staff time devoted to developing the system and training the users.

Additional Readings:

Christensen, W.W. and Stearns, I. (1984). Microcomputers in Health Care Management. Rockville, Maryland: Aspen Systems Corporation.

Norton, P. (1986). Inside the IBM PC. New York, NY: Brady Communications Company.

Byers, R.A. (1986). Everyman's Database Primer. Torrence, CA: Ashton Tate.

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Vasta, J.A. (1985). Understanding Data Base Management Systems. Belmont, CA: Wadsworth Publishing Company.

Reitman, W. (ed.), (1983). Artificial Intelligence Applications for Business. Norwood, New Jersey: Ablex Publishing Corporation.

Williamson, M. (1985). Artificial Intelligence for Microcomputers: A Guide for Business Decision Makers. New York, NY: Brady Communications.

APPENDIX C

METHODS FOR INVOLVING THE COMMUNITY

This appendix focuses on the methods to be used in each stage of involving the community in COPC: provider preparation, outreach and recruitment, community preparation, obtaining community input, using community input, and follow-up.

Table C summarizes each of the different phases of community involvement, including its goals and examples of methods that may be used in each. This appendix should assist the reader in identifying the resources necessary for involving the community effectively in the COPC program and to know when technical assistance may be necessary.

PHASE I. PROVIDER PREPARATION

The goal of this phase is to enable providers and board members to be receptive to input from the community. When community members are involved at some level in a health care program, it is often assumed that the only group which needs preparation for this involvement is the community. Often overlooked is the need to train or prepare providers in some way to be both receptive and responsive to community input. Ideally, anyone on the clinic staff who will be working with the community or who will be directly affected by community participation should have some type of preparation.

The following list describes some of the methods which can be used to prepare providers for community involvement with COPC:

Orientation to community involvement--These activities communicate to clinic staff how and why the community will be involved in the health care program. The barriers and benefits to community involvement should be discussed along with the issues or concerns community involvement raises among the staff. Special efforts should be made to address these concerns.

Training--Training builds skills among the participants. Depending on the level of community involvement and the situation of the clinic, a variety of skills may be required among the staff to facilitate community involvement. Training of any group is most effective when designed to meet the needs of the specific group being trained. While a wide variety of very good "prepackaged" training material has been written, published and is available, each should be carefully reviewed before being used. This is not to imply that every training program must be designed from scratch; however, it does mean that any pre-prepared program must be adapted to address the specific needs of each clinic. Examples of training programs which could be beneficial include:

> Group Process--enables staff to work effectively with community members in group situations.

TABLE C: Methods of Community Involvement

Phase of Involvement	1. Preparation of Providers	2. Outreach/ Recruitment	3. Preparation of Community	4. Obtaining Community Input	5. Using Community Input	6. Follow-Up
	Goal: To enable providers to be receptive to community input.	Goal: To identify and select representatives of the community to participate in COPC program.	Goal: To increase community members' ability to participate in COPC.	Goal: To obtain information from individuals and groups that will contribute to to COPC.	Goal: To incorporate information from the community into the program.	Goal: To report back to the community on the results of their input and/or to obtain their reaction to how it was used.
	METHODS - Orientation to community involvement - Training on: * Group process * Board roles * Cross-cultural awareness * Community organizing	METHODS - Appointment (by the clinic or a community organization) - Election (by the clinic or community) - Self selection - Random method	METHODS - Orientation to health program and COPC - Education on health care system - Training on: * Group process * Board roles * Cross-cultural awareness * Community organizing	METHODS For obtaining information from groups: - Brainstorming - Nominal group - Role play - Gaming simulation For making group decisions: - Autocratic - Democratic - Consensus - Default For obtaining information from individuals: - Interviews in-person, or by telephone - written questionnaires	METHODS - Select an articulate community member to present info to the clinic - Select an influential clinic member to present info - Write a formal report to the clinic staff or board - Write informal memo	METHODS Individual - Acknowledgments - Report formally to participating organizations - Public information campaigns

Cross-Cultural Training--increases the staff's ability to work effectively with individuals from different cultural backgrounds. This is particularly important in situations where providers and community members are expected to work collaboratively on a project and cultural values may differ. The "Cross-Cultural Training Needs Assessment Questionnaire," located in Appendix D, may be adapted and used to identify the need for this training.

Board Member Training--provides staff with the skills necessary to fulfill the roles and functions necessary to support a Board of Directors (or any decision making body) and assist it in functioning effectively.

Community Organizing--builds skills to help organize and activate communities to participate in activities that support the community health care program.

In most cases, an orientation and training on community involvement can be conducted by the director or staff of the clinic and requires no outside resources. If a clinic does not have the capacity to plan and conduct a full training session or workshop, technical assistance can often be found either locally, or within the state. Training resources may be found through: local health systems agencies; other health planning bodies; public health departments -- state or local; areawide health educators, or AHECs -- Area Health Education Councils; or local or regional health consortiums. (A listing of some of these agencies is located in Appendix D of the Federal 330 funding Need/Demand Assessment Guide.)

PHASE II. OUTREACH AND RECRUITMENT

The goal of this phase is to identify, contact and enlist the individuals or groups from the community whose input is desired in the development of COPC. This phase of the process requires careful consideration to assure that individuals are recruited who are both representative and able to contribute to the development of COPC. In his chapter on Governance of the Planning Body, Blum (1981) reveals many of the issues and dynamics involved in selecting community members for involvement in health planning. This material should be reviewed before beginning the recruitment process.

There are a variety of methods that may be used to identify and select community members for involvement in COPC.

Before recruiting can begin, the following questions will need to be answered:

1. How many individuals are needed?
2. Who in the community are these individuals supposed to represent?
3. What special interests, skills, or knowledge do these individuals need to have?
4. Who will these individuals be accountable to?

The next step will involve identifying potential candidates for participation in COPC activities. A common method for identifying candidates is by referral from members of the clinic or board, other health or social service agencies, or directly from community organizations. Other methods for identifying candidates include advertising for participants and screening the respondents, holding community meetings designed to generate interest for community participation, or by identifying leaders within the community and asking for either their participation or referrals.

Once a pool of candidates has been identified, the clinic should select who will participate. If there are only as many candidates as positions available, there may be no question about who to select. When it is necessary to make a selection, the candidates should first be screened to find out who is qualified. Methods of making the selection include: appointment by the clinic; appointment or election by the community organizations to which candidates belong (if this applies); election from the general community; or by self selection, i.e., anyone who volunteers to participate is accepted. Self selection is used most often when community members are recruited as information resources.

An additional method of selection is by random choice. In some cases, such as when three equally qualified individuals have been identified for one position, the selection process may be random, such as by drawing lots. However, caution should be used when selecting people randomly from the general community. In order to obtain opinions or information which is representative of the community, it may be more useful to target specific segments of the population and identify those individuals who would be willing to participate.

PHASE III. PREPARATION OF COMMUNITY MEMBERS

The goal of this phase is to enable community members to participate effectively in the development of COPC. Once individuals have been recruited, it will be necessary to prepare them for the roles they will fulfill. The extent and type of preparation used will be heavily dependent on their level of involvement in the COPC process.

When community members are involved in a decision making capacity, the extent of preparation is likely to be greater. Methods of preparation include: orientation to the health agency; learning about the health system and issues relevant to the local community; training in the basic skills of "boardsmanship" (group process skills, the functioning of committees, etc.); or cross-cultural training.

Advisory level involvement may require the same or less preparation, depending on how the role is designed. Methods of preparing the community for this level are basically the same as for the decision making level, however, community members should be briefed to prepare them to meet the demands of their roles.

When community members are involved at an informational level, the only preparation which is required would be arranging an introductory meeting designed to increase their willingness to participate. Often, the purpose of

this level of involvement is to obtain candid responses to questions designed to elicit specific information.

Resources which may be available for community preparation may be found in: local health consortiums; health systems agencies; health departments (the health education section, if there is one); community colleges or universities. (Appendix D of the Federal 330 funding Need/Demand Assessment Guide contains a listing of different groups which may be able to assist in this stage of community involvement.) In addition, a wealth of training and related information has been published and is available through health departments, university, college and public libraries.

PHASE IV. OBTAINING COMMUNITY INPUT

The goal of this phase is to obtain information from individuals that will contribute to the development of COPC in the health care program. The depth and extent of information received depend on the methods or techniques used in this phase. Because these methods are so variable and are dependent on the special circumstances of each clinic, this section will not attempt to cover the spectrum of methods available. Rather, it will offer a sampling of methods which can be used for different types of community involvement. The methods in this section will be divided into those which apply to groups and those which apply to collecting information individually.

When working with groups, the preparation for the meeting will play a critical part in how the meeting will run. Preparation for any group meeting should include considering:

1) Purpose. Is there a clearly understood purpose for the meeting? If not, this should be clarified either before or at the beginning of the meeting.

2) Who is attending? How many people will be there? Do they know each other? Are the individuals in the group talkative or quiet? What is each attendee's current level of knowledge of the issue at hand?

3) Setting. Do you have a room large enough to seat everyone comfortably? Is the set-up of chairs conducive to discussion? Can everyone see the visuals presented (slides, flip-charts, chalk board, etc.)?

4) Materials. Are there enough materials (handouts, pencils, notecards, etc.) for everyone to use? Can audiovisual materials be used easily?

5) Agenda. A list of topics or questions to be discussed during the meeting should be clearly outlined <u>prior</u> to the meeting.

How a meeting is run will influence the degree of participation and how candid members will be when they participate. Methods for conducting group meetings are highly varied and the effectiveness of a particular technique will depend on the nature of the group and its leadership structure.

Commonly used methods that can increase participation in group situations include brainstorming, nominal group process, role playing, and gaming simulation. These techniques, as well as other interactive methods, are described in detail by Fortine et al. (1978) in a training manual which is referenced in the Additional Resource Materials at the end of this appendix.

If the clinic is developing a new decision making committee, the methods for making decisions will need to be determined. The most common methods for making decisions include:

1) Autocratic--where one person makes the final decisions;

2) Democratic--where decisions are made by simple majority vote or by some other predetermined percentage of the vote, such as a two-thirds majority;

3) Consensus--where everyone in a group consents to a particular decision, although not everyone need support it;

4) Default--when a group cannot come to a decision on a given issue.

Group processes which can facilitate decision making include nominal group process, delphi process, etc. Each of these processes give all participants equal priority in the decision. (Descriptions of the nominal group and delphi process are discussed in "Needs Assessment Process for Community Health Education" (Gilmore, 1977) and referenced in the Additional Resource Materials at the end of this appendix.

Methods for obtaining information from individuals include interviewing individuals in person, over the telephone, by written questionnaire, or some combination of the above. As in working with groups, planning for these interviews plays a critical role in how well they will turn out. An important aspect of this planning involves designing the questions to be asked. Questions which are most effective are those which are stated in a way which is meaningful to those who will be answering them.

For example, one clinic designed a survey to find out where the homeless in its community went for health care services. The questions that were written by the clinic were stated as: "Where is the last place you received health care?" When the clinic pretested this questionnaire, they received few meaningful responses, with many individuals responding with, "I don't remember" or "I don't go to doctors." After involving members of the homeless community in designing the questions to be asked, the clinic restated the question in a way that had meaning to the community by asking, "If you had a severe stomach pain, what would you do, or where would you go?" The responses to this question were much more meaningful and allowed the clinic to gain valuable insights into how the health care system was viewed by the homeless in their community. The Cummings and Hulley (in press) reading, Designing Clinical Research-The Design of Questionnaire and Interview Instruments, referenced in the Additional Resource Materials, provides very helpful guidelines for this process.

Techniques which can be used for informational level involvement of the community include:

1) Key Informant Technique--where "key informants," or individuals who would have valuable information about your community (such as clergy, police, teachers) are interviewed by someone from your clinic.

2) Community Survey--where a sample of the population answers specific questions for purposes of developing COPC.

3) Focus Groups--where individuals from the target community are gathered to give their reactions or opinions on a specific issue or program.

These techniques are discussed in detail in the Additional Resource Materials in "Needs Assessment Techniques" and "Pre-testing in Health Communications" (National Institute on Drug Abuse 1981; U.S. Dept. of Health and Human Services, 1984). The methods available for gathering information at this level all contain trade-offs between the effort required to gather the information and the validity of the information received. For example, while conducting a random sample suvey in the community may provide the most accurate results, it is also the most time consuming and costly method of gathering information. Interviewing key leaders from within the community will require less time and resources, however, the information received will be limited to the opinions of those interviewed.

Each of these techniques may be modified to fit the needs of the clinic program. Few clinics will have the time, money or staff to carry out a random sample community survey. This method can be modified, however, by targeting a very small sample of the population, and by varying the method by which the data is collected. Unfortunately, narrowing the sample will limit the staff's ability to generalize the results, which should be considered before selecting a data-collection methodology.

PHASE V. USING COMMUNITY INPUT

The goal of this phase is to assure that the information obtained from the community is incorporated into the COPC Program. If the community holds decision making power, this phase is already built into the process. For all other levels of involvement, the information received from the community must be deliberately incorporated into the decision making process or transferred to those individuals within the clinic system who are in the most advantageous position to use it. While this may appear obvious, all too often valuable information is not utilized because it was not given to the right person or committee, or was relayed inaccurately to the appropriate persons.

Using information effectively will involve answering the following three questions.

Who is in a position to take action based on the information received?

How can this information be presented most effectively to these individuals?

When is the best time to present it?

While determining who is the best person(s) to receive community input will be unique to each clinic, there are a variety of ways to present the information. Some of these methods include:

- Have someone who participated in the community group present the information in an oral report.
- Select someone who can answer questions and advocate for the community's position once the information has been presented.
- Develop a formal, written report with the community's recommendations.
- Write an informal memo.
- Give information to someone who is influential within the clinic and will support community recommendations to present to the clinic.

Delivering information to the appropriate persons should be done as soon as possible after collecting it. However, when a timely presentation is not possible, both the expectations of the clinic and the community should be taken into account. Maintaining credibility with the community and the clinic can be influenced by when information is used, as well as by how it is used.

When the community is involved on the information level, an additional step will have to be taken before deciding who the information should go to, how and when it should be presented. This step involves synthesizing and analyzing the information received. Information gathered at this level is often taken from many different individuals. Before it can be used by the clinic, it must be summarized in a manner that will be meaningful to providers. This process may be as simple as tabulating the number of individuals who gave certain responses to questions or it may be more complex, involving grouping information into categories and looking for subtle differences in meaning between responses. The difficulty in interpreting the information will depend on how carefully the questions were thought out before they were used, and how accurately the responses were recorded.

PHASE VI. FOLLOW-UP

The goal of this phase is to report back to the community on how its input was used or what changes took place (or did not take place) as a result of this input. This phase is extremely important for either maintaining current levels of involvement or developing new community involvement with the COPC program. Individuals will seldom continue to put time, thought, and energy into a program if there is no indication that their efforts are being used.

Methods of follow-up will vary, depending on the level of involvement and the circumstances of the clinic. Examples of methods for following up with the community include:

1) Acknowledgement

Letters or awards from the clinic's administration to those community members involved in COPC activities acknowledging them for their work.

2) Organizational Reports

For participants who are representing a community organization (outside of the clinic), follow-up may take the form of reporting back to the organization on how their input was used and how it affected the health program. This may also be used as a time to obtain feedback from the organization involved.

3) Public Information Campaigns

For community participants who are not representing an organization, follow-up may take the form of a public information campaign geared toward the general community. The main purpose of such campaigns, if used, should be to inform the community how representatives have influenced the health care program and what changes have occurred as a result.

This technique can serve several purposes in addition to the follow-up. It can be used to stimulate increased involvement from the community, as well as to increase awareness of health issues and of the health care program. Methods for using the media and designing public information campaigns are described in Fortine, et al. "Trainers Module: Informing the Public," referenced in the Additional Resource Materials.

Additional Resource Materials

Gilmore, G.D. (1977). Needs assessment processes for community health education. Int. J. Health Educ., 20(3), pp. 166-173.

This article outlines how to use nominal group process, the delphi process, advisory committee process, as well as the telephone survey process for conducting a needs assessment.

Fortine, F., Lofgren, F., Hart, C., and Fairbanks, D. (1978). Trainer's Manual and Training Modules. (Training guidelines for Health Systems Agency Board Members). Seattle, Wa.: The Puget Sound Health Systems Agency. (DHEW Contract HRA 230-76-0215).

This manual presents both a format and methods for training Health Systems Agency board members on how to fulfill their roles as health planners and team members. Includes numerous group process techniques, methods for informing the public and training volunteers which are applicable in a variety of settings. Available from: Western Consortium for the Health Professions, 2001 Addison, Suite 200, Berkeley, CA 94704-1103.

National Institute of Drug Abuse (1981). Needs assessment techniques: Part II. In A Needs Assessment Workbook for Prevention Planning, Washington DC: USDHHS, Pub. No. (ADM) 81-1061, pp. 29-41.

This document describes several techniques for collecting community-based information, including the "key informant" technique and the community survey. Available from: Western Consortium for the Health Professions, 2001 Addison, Suite 200, Berkeley, CA 94704-1103.

National Cancer Institute, National Institutes of Health, (1984). Pretesting in Health Communications: Methods, Examples, and Resources for Improving Health Messages and Materials, USDHHS, DHS, NIH Publication No. 84-1493. Bethesda, Md.

This manual describes methods for developing and pretesting health messages for public distribution, including how to conduct focus group interviews. Available from the National Institutes of Health, National Cancer Institute, Bethesda, Maryland 20205.

Hulley, S.B. et al., (in press) The design of questionnaire and interview instruments. In: S.B. Hulley and S.R. Cummings (eds.), Designing Clinical Research: An Epidemiologic Approach. Baltimore, Md.: Williams and Wilkins.

This chapter describes how to design survey and interview questionnaires in detail. It includes information on pretesting and refining questionnaires and gives examples of different types of questions. This book will be available in December, 1977.

APPENDIX D

CROSS-CULTURAL TRAINING PROGRAM NEEDS ASSESSMENT QUESTIONNAIRE

This appendix is a sample questionnaire which may be adapted and used to assess the need for cross-cultural training for community health center staff. This questionnaire was developed and used successfully by a team of students from the University of California at Berkeley, School of Public Health. For additional information, contact Magdalena Avila, MPH/MSW, Prevention Research Center, 2532 Durant Avenue, Berkeley, CA 94704.

Source: Askari, E., Avila, M., Masters, N. and Rubin, J. (1985). "Needs assessment questionnaire," In Cross Cultural Training Program. (unpublished program plan) University of California, School of Public Health, Berkeley.

NEEDS ASSESSMENT QUESTIONNAIRE

Cross-Cultural Training Program for Health Care Providers Survey Questionnaire

1. What is the ethnic/racial makeup of the patients/clients you serve? Please estimate the percentage for each of the population groups listed below:

Ethnic Group:	Percentage of pts/clts
Afro-American	_____
Asian/Pacific Islander	_____
Caucasian	_____
Latino	_____
Other_____	_____

2. What barriers have you encountered in providing care for patients/clients from ethnic or cultural groups different than your own?

_____

_____

_____

_____

_____

3. Each of the following are factors which can influence the quality of care provided to patients/clients from ethnic minority populations. For each item, please indicate whether or not this has been an area of difficulty for you in serving minority populations, and if so, to what extent?

Factor	no difficulty	some difficulty	much difficulty	not applicable
A. Verbal communication (language)	_____	_____	_____	_____
B. Non-verbal communication (body language)	_____	_____	_____	_____
C. Patient compliance with treatment	_____	_____	_____	_____
D. Ability to interpret patients' reporting of symptoms	_____	_____	_____	_____
E. Appointment Keeping	_____	_____	_____	_____
F. Acceptance of western styles of medical treatment	_____	_____	_____	_____
G. Estimation of appropriate physical proximity btw patient and provider	_____	_____	_____	_____
H. Conflict of values	_____	_____	_____	_____

4. What skill areas or issues should be addressed in a training workshop to assist health care personnel in providing culturally appropriate health care to patients/clients from different ethnic backgrounds?

_____

_____

_____

_____

_____

_____

_____

5. Do you believe such a cross cultural training program is needed where you work?

yes_____ no_____ unsure_____

Comments:

6. Have you ever participated in a similar type of training program?

yes_____ no_____

If yes, please describe and comment on its usefulness to you:

6.5 Would you be willing to pay a fee for this type of training?_____

7. What is your job title?_____

8. What is your ethnic group (optional)_____

9. Name (optional)_____

10. Agency (optional)_____

11. Other comments:

BHCDA

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